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ELMER DREW MERRILL - AN APPRECIATION

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It was a year ago that Elmer D. Merrill,* Arnold Professor of Botany Emeritus of Harvard University and former Director of the Arnold Arboretum, passed away after a lingering and weakening illness. As the realisation that he is no longer with us grows, so grows the appreciation of the botanical world for one of its great pioneers and scientists.

Merril was born into a typical New England village of the past century: East Auburn, Maine, with fewer than 50 houses and one church, a community of farms and small industries. Life went on complacently there, more or less oblivious of what happened in the great world beyond, and few residents ever travelled "farther than Auburn or Lewiston, or perhaps Portland or Boston". It was the kind of environment usually thought least likely to breed men of great international outlook. But Merrill had in his veins the blood of Huguenot pioneers. A descendant of Nathaniel Merrill, who settled in New England in 1635, Merrill once wrote: "Pioneer spirit apparently existed on both sides of the family. My grandfather Noyes was a 'forty-niner'.... My father ran away from home and took to the sea at the age of fourteen, shipping as a cabin boy.... to the Orient via Cape Horn.... The call of the sea remained with him, however, for many years after he settled at Auburn." His parents were "people of limited means, and for several generations back were apparently 'hewers of wood and carriers of water',.... an upright, industrious people characteristic of rural New England".

As a boy, he attended country schools in East Auburn, but later he walked daily to attend a high school in Auburn. An early love of nature was evident, although, as Merrill often said, there was no trait in his ancestry that could explain it. This love was fostered and encouraged by his high school teacher in biology, so he went on to the study of "natural history". Earning his way, he studied at the University of Maine and received his B.S. in 1898, serving as class valedictorian. As assistant in natural sciences, he spent the following year in further course-work and in individual reading and research, an occupation that developed at such a pace and quality that the University granted him the M.S. in 1904. His first botanical paper — "Notes on Maine plants" — was published in *Rhodora* in 1899, a result of early field researches. His drive and determination to "get things done" is exemplified by his acquisition of a coveted copy of Britton & Brown's *Illustrated Flora of the Northern United States, Canada and the British Possessions* from

*) Elmer Drew Merrill, B.S., M.S., Sc.D., Ll.D., M.L.S. Born: East Auburn, Maine, October 15, 1876; died: Boston, Massachusetts, February 25, 1956.

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Dr. Britton of New York through barter with dried specimens, duplicates from his own herbarium of the Maine flora which he had built up to approximately 1000 numbers by this time. Shortly after being graduated, he donated his entire herbarium to the New England Botanical Club.

Merrill unwittingly laid the foundation for his long life of botanical peregrinations in 1899, when he decided to take a position as assistant agrostologist in the United States Department of Agriculture in Washington. He held this post until 1902, working assiduously, studying medicine at George Washington University on the side and publishing a number of technical papers on grasses the while. So well did Merrill train himself in this period that his superior early delegated to him greater responsibilities and, in 1900, sent him to the West, to Wyoming, Idaho and Montana, to carry out studies on the ranges and to "realise that New England is not all of the United States". In 1902, when he was offered the position of botanist in the Philippine Islands, recently freed from Spanish rule and put under American jurisdiction, he at first turned the offer down. He felt that he was far from possessing the knowledge and experience that such a pioneering work required, and he declined the offer and returned to his North American grasses, with a feeling that "I had really found my own niche in life".

This refusal, however, was not satisfactory to those in charge of choosing the personnel of the new Insular Bureau of Agriculture in Manila, especially to Merrill's chief and colleague in agrostology, Mr. F. Lamson Scribner, who had first proposed his name. The appointment was once again offered to Merrill in 1902, after Governor Taft of the Philippines had visited Washington. The second offer carried a higher salary than the first, but still Merrill declined. But when Scribner argued with him and pointed out that nobody in the United States had any knowledge of the Philippine flora and that he would have as good a chance as anyone to do a creditable job, Merrill accepted.

Merrill was highly regarded in government circles. Scribner's successor tried to convince Merrill that he should renounce the Philippine venture and, at an attractively high salary, remain in Washington; but his attempts were in vain.

Merrill accepted the appointment on February 20, 1902 and his boat for the Philippines sailed from New York on February 22. With that speed and efficiency so much a part of Merrill, he arranged his personal affairs, packed and, train delays notwithstanding, sailed on schedule without any inkling that it was the turning point of his life. "I was off on my long adventure; I, least of all, anticipated that for twenty-two years I would remain in the Philippines."

On his way to the Philippines, Merrill was able to visit the botanical centres in Ceylon and Singapore — beginnings, these visits, of a long period of close association with scientific institutions throughout the Far East.

Arriving in Manila in May, in the midst of an epidemic of cholera, Merrill took up his official duties in a private dwelling rented to the Bureau of Agriculture, reporting for work to an unfurnished room without even "a chair or table, much less a botanical publication or a botanical specimen". He was informed that he was to give his time and attention to "practical" work, but he soon decided that the building up of a reference collection and library was his prime task. With that Merrillean speed and determination that has sometimes earned for him the reputation of being autocratic, he set out to do what he held to be the important work, the ideas of administrative officials to the contrary notwithstanding.

It became apparent early that the governing powers felt it best to centralise all botanical work in one bureau. Since a very modest start had been made towards a collection of plant specimens and books at the Bureau of Forestry, Merrill arranged his transfer to this organisation, dividing his efforts, however, between the Bureau

Elmer Drew Merrill at the Escuela Agricola Panamericana in Honduras, 1953.
Photograph by L. O. Williams.

of Agriculture and the Bureau of Forestry. He immediately began an intensive collecting programme, the first fruits of which were "representatives of all the weeds in the backyard of our 'office building' ". The large Vidal collection had been destroyed by fire a few years before and a duplicate set in a Manila Museum had disappeared. A small botanical library at the Jardín Botánico had apparently been stolen. The Fernández-Villar collection, basic to the third edition of Blanco's *Flora de Filipinas*, had been destroyed in the burning of a monastery during the war in 1899. What would have thwarted the usual man, however, challenged this young pioneer from Maine: the very paucity of facilities stimulated him and led to the collecting, the traveling and the visits to foreign herbaria that were to fill the years ahead.

He made collecting trips to all parts of the Philippine Archipelago. In the first few years, half of his time was spent afield. Few men in the government service visited more localities than Merrill, and none with the steadfastness of purpose that guided him. "It never lost fascination," he wrote of this field work, "for I soon discovered that as far as the Philippine flora was concerned, exploration had been desultory; its little known wealth was only to be uncovered after years of arduous work in the field and in the office." This field work of Merrill, of his colleagues in the forestry service and of Filipino associates whom he trained, built up a rich herbarium, numbering, on his leaving the Philippines, 275,000 sheets which he planned to use as the basis of a Flora of the Philippines. With wise forethought, he sent more than 500,000 duplicates to foreign institutions, thus safeguarding the work against possible loss.

The formation of this herbarium was beset with difficulties that might well have discouraged a man of lesser drive. No serious botanical identification could be done in Manila, because of the lack of literature and herbarium facilities. In 1902, he set out to visit Buitenzorg in Java with a large collection of specimens to identify. Two months sufficed to determine his plants and familiarise himself with the literature necessary for carrying on his work back in Manila. His transfer to the Bureau of Government Laboratories and a large grant for the purchase of books enabled him subsequently to build up one of the foremost botanical libraries in southeastern Asia.

As little by little the need became evident for investigating a wider geographic area fully to understand the Philippine flora, Merrill carried on studies and collecting in China and on islands near the Philippines, while his associates penetrated Borneo, Indo-China, the Marianna Islands, Guam and Amboina. With the addition of several botanists to his staff (Dr. E. B. Copeland, Dr. H. N. Whitford and Mr. A. D. E. Elmer) and the increase in well-trained Filipino field men, he enlarged his programme and initiated an active exchange of plant materials with Japan, China, India, Java, Australia and other countries. The interest of European and American botanists in the Philippine flora was stimulated by Merrill, and he was able to enlist the collaboration of great botanists the world around, such as Prof. Oakes Ames of Harvard University who classified the rich orchidological flora of the Archipelago.

The world-important herbarium and library which Merrill and his associates built in Manila was purposely burned by the Japanese Army one day before the liberation of Manila in 1946. Painful blow though it must have been to Merrill and his earlier associates, he at once encouraged Dr. Eduardo Quisumbing, an outstanding Philippine botanist whom he had trained, and his Philippine friends to begin again. Merrill himself, by this time at Harvard, found time and strength to locate duplicate material in American and European herbaria to aid in this rebuilding under the aegis of Philippine scientists.

As time went on, Merrill was appointed Associate Professor of Botany in the University of the Philippines and part-time head of the Department. This heavy extra teaching and administrative load naturally seriously reduced his botanical productivity. Accordingly, this connexion with the University terminated in 1919, and Merrill was given full time for his own research in the Bureau of Science.

In 1906, in great part at Merrill's insistence, the *Philippine Journal of Science* was established. A pioneer in government scientific journals, it was from the start heavily botanical. Throughout his stay in the Philippines, Merrill did the editorial work on botanical articles.

In May, 1907, Merrill married Mary Augusta Sperry of Illinois in Manila. Immediately after the wedding, the couple began a cruise to the United States, visiting China and Japan en route. On the return trip he visited Kew and the British Museum, Leiden and other herbaria on the continent to study the types of Philippine plants. All but the youngest of their four children were born in Manila: Lynne, in 1909; Dudley Sperry, in 1912; Wilmans Noyes (who died in infancy) in 1914; Ann was born in Washington, in 1916. In 1915, while visiting Washington, the Merrills decided that it would be better for the children to remain in Washington. Accordingly, Merrill returned to Manila alone, to be separated from his family for the next eight years, except for a leave in 1920.

Once back in the Philippines, Merrill began work with renewed vigour, devoting even more time and energy than previously to his programme. But he found time for non-botanical interests, such as the Masons, in which he rose, in his characteristic manner of "getting things done", to the 33rd degree, and the large men's social group in Manila, the Columbia Club, in which he rose to be president.

An enumeration of Merrill's accomplishments in this second part of his Philippine stay would be long and has been discussed in detail by Merrill himself and by Quisumbing. A mere brief mention of several of his accomplishments, almost any one of which would be considered outstanding in itself, must suffice. By 1914, the Bureau of Science had grown from its sad beginnings in a vacant house to a proud new building, and most of the scientific work of the Philippines — medical and public health, mining, fisheries, anthropology and other branches of science — had been centralised in the Bureau. With the retirement in 1918 of the Bureau's director, the Governor-General of the Philippines appointed Merrill to fill the vacancy. Even though he had temporarily served as Acting Director, it was an unexpected appointment, albeit an honour. Nevertheless, Merrill realised that further administrative work would lessen his scientific output. Merrill's tasks as Director multiplied incredibly in number and complexity, as he had to act in such diverse fields as the manufacturing of vaccines (not only for the Philippines, but also for many cholera-ridden cities of China) and the drafting of regulations concerning oil-lands.

Merrill had long planned a *Flora of the Philippines*, but this plan he had to sacrifice when he became Director of the Bureau of Science. In 1912, he had published a *Flora of Manila* in connexion with his teaching duties. The *Flora of the Philippines* did, however, become his *Enumeration of Philippine Flowering Plants*, published in four volumes between 1923 and 1926. It attempted "to account for all binomials accredited to the Philippine flora, adjust the synonymy, cite all important literature references, illustrative collections when desirable, determine the Philippine and extra-Philippine distribution of each species and record native names". The indexes list more than 21,000 binomials and 12,000 native names of plants. Merrill succeeded admirably in these goals and produced a work that will always be basic to Philippine, nay, to Malaysian botanical work.

With the exception of botanical trips and three short visits to the United States

Elmer Drew Merrill enjoying the visit of friends at his home in Jamaica Plain, Boston, in 1953. Photograph L. O. Williams.

on leave, Merrill took no vacation from 1902 to 1919. His capacity for work without apparent tiring was evident throughout his stay in the tropics. As one of his admirers aptly wrote: "His reaction to added work was to lengthen the day". During his last year in Manila, Merrill was offered the presidency of the University of Manila, but he declined this honour.

By now, Merrill's reputation as scientist and administrator was known far and wide. In 1923, the University of California offered him the Deanship of its College of Agriculture. Merrill's family lived in California, and this appointment appealed to him, the more so because of the possibility of rejoining those from whom he had so long been separated. It was not, however, without regret that Merrill left the Philippines, where his life's botanical work lay and where he had many friends and admirers. One Manila paper referred to him as "almost more of a Philippine than an American", a high compliment accorded to very few foreigners. Another editorial, entitled "Keep him", urged the government in the strongest terms to induce Merrill to stay. The editorial pointed out that before Merrill was appointed Director, the position had been offered to several Filipinos, all of whom declined in favour of Merrill. It ended by advising: "When you have a good man, keep him."

It was not a tranquil situation that Merrill entered at Berkeley, where he found conflicting ideas on policies, resulting in part from a very rapid expansion during the previous ten years and in part from a tendency for the College of Agriculture to feel less and less that it formed an integral part of the university.

Merrill's ability to go forthrightly — sometimes even bluntly — to the core of a problem, saw him through, even though he himself felt that he lacked "experience with academic or research problems in agriculture; knew nothing of the special problems of the College of Agriculture and still less regarding the problems of Californian agriculture". He took a strong stand that the College of Agriculture must continue to form a part of the university; and he succeeded in raising the standards of teaching and research. He has stated that he departed from custom by encouraging staff members to take advanced degrees; and, not always without opposition, he worked for measures which he believed would make administration more efficient. Merrill considered his most valuable contribution during his Deanship to be the establishment of the technical journal *Hilgardia* in 1925. From 1927-1928, Merrill served as Director of the California Botanical Garden, in Los Angeles.

On the occasion of Merrill's resignation, the Dean of the Graduate Division of the University of California said publicly: "It is given to few men who carry the burdens of an important office with numerous and complicated problems over a period of years, to close their labors in such an office on terms of friendship with all with whom they come in contact and with themselves. Such, however, is strictly true in the case of Dean Merrill.... It is fitting that as he takes leave of us.... we of the University of California record, not only our deep regret at losing him, but also our profound appreciation of his remarkable contribution to the success and effectiveness of the program of the College of Agriculture, of the scientific activity of the University in general, of our gratitude for the friendship and sympathy which he has shown to his colleagues unfailingly and of the high regard which we all entertain for him as a scholar, a scientist, and, above all, a lovable human being."

In January, 1931, Merrill accepted the post of Director-in-Chief of the New York Botanical Garden, upon the retirement of Nathaniel Lord Britton. He was simultaneously named Professor of Botany at Columbia University.

Merrill asked himself the question: "Why should one elect to leave California where one had met with a measurable degree of success, to take his chances, after middle life, in New York....?" His own stated reasons were forthright: he had confidence in his successor to carry on the work that he had begun; he yearned

to return to the botanical field which was more truly his *forte* than was agriculture; and he believed that he could help make the New York Botanical Garden still more outstanding than it had been in the past.

His five years in New York were marked primarily by success in administration of one of the world's largest botanical and horticultural centres during one of the most serious economic recessions that the country had ever experienced. He kept the vast programme of the Garden going without retrenchment through the lean years. "An iconoclast in reference to currently accepted herbarium methods", he substituted new procedures for certain conventional practices. He initiated, for example, the incorporation of original descriptions in the folders with the plants themselves. Some of his other innovations, now well known, were the inclusion in the herbarium of photographs of types, carbon rubbings and photostats. While most of these ideas were not original with Merrill, they had never been tried in a large herbarium. Perhaps Merrill's outstanding innovation during this period was the integrated *Kew Index*. This plan, providing for the cutting up of two original volumes and all supplements of this invaluable work and mounting the entries in alphabetical order, resulted in an incredible saving of time. Much — in fact, most — of this work Merrill found possible by taking advantage of the Works Progress Administration and other governmental agencies for the assistance of those who, through the business depression, found themselves temporarily without the means of earning a livelihood. He was influential in 1930 in having the *International Address Book of Botanists* published, and one of his triumphs at New York was his founding in 1931 of *Brittonia*.

Along with his heavy organisational and administrative duties, Merrill was able to resume his taxonomic and phytogeographical research on the flora of the Far East — his chief interest — and this, perhaps, more than anything else, made his years at New York happy and productive. Shortly before his death, he gave his personal library of 2600 titles and his diplomas and decorations to this institution. Duplicates from his library were sold, and the proceeds established at the New York Botanical Garden the *Elmer D. Merrill Fund* for botanical publication or for a medal for deserving botanists or botanical students. After his death, this Fund was enlarged by contributions from many parts of the world.

Merrill often joked about his "coming back east" in successive steps — Manila, Berkeley, New York. The final move east was in 1935, when he came to Harvard University in Cambridge, Massachusetts, as Administrator of Botanical Collections. This move to Harvard marked a milestone in his career. For the first time, Merrill was taking an administrative post in a private institution. And Harvard was not only private but was well known as a stronghold of individualism and natural nonconformity to set patterns. His previous experience had been entirely within governmental or civic entities. It must have been difficult for Merrill at first, for so many years in government service cannot help but mould the most individualistic of men to some degree to the deadening monotony so often characteristic of government bureaus.

Through a century and a half, there had grown up at Harvard eight separately administered botanical units; the Gray Herbarium, Arnold Arboretum, Botanical Museum, Farlow Library and Herbarium, Harvard Forest, Atkins Garden and Research Laboratories in Cuba, Bussey Institution and Maria Moors Cabot Foundation for Botanical Research. They were sometimes referred to as the "orphans", sometimes as "Harvard's botanical empire". The aim of the post of the Administrator of Botanical Collections was the drawing closer of these semi-autonomous botanical institutions to reduce excessive duplication of effort and equipment, thus enhancing the efficiency of research. This was a new title at the University, and its creation

resulted from a long-growing feeling on the part of administrative and academic officials that some sort of coordination might be desirable.

For several reasons, the most weighty of them being, as Merrill pointed out in his Annual Reports for 1941, 1942 and 1943, the world conflict with resulting economic and financial uncertainty and serious curtailment of building materials,

Caricature of Elmer Drew Merrill sketched in 1950 when he was acting as moderator of the Taxonomic Section of the VIIIth International Botanical Congress in Stockholm.

little was accomplished towards effective material coordination of the Harvard botanical units. This had to await more favourable times. As one of his colleagues has written, "his last Annual Report gives a retrospect of his eleven years and shows the orphans, though still orphans, growing healthily".

A year after his arrival at Harvard, Merrill became Arnold Professor of Botany and, in 1937, Director of the Arnold Arboretum. He devoted his major efforts to

the building up of the great herbarium of this institution and to research on Asiatic plants, cooperating with the botanists of the Archbold Expeditions and similar endeavours. He was eminently successful in securing gifts for the prosecution of this work, even during the hardest war years. From 1936 to 1946, the Arboretum's endowment had been increased by about $ 321,500. Merrill wrote in his final (1946) Annual Report: "When one considers that the decade 1935-1946 covered the last half of a long-continued financial depression which actually ceased only after the most destructive war of modern times was initiated, the financial record must be considered as at least satisfactory. It was from the gifts for immediate expenditure that much of the expansion activities were financed in the past decade, for the normal income in general sufficed only to take care of obligated charges."

Wherever world conditions permitted, he encouraged collectors to send in their material, which resulted in the arrival of specimens in unprecedented quantities from China, India, Indochina, Burma, Siam, Malay Peninsula, Philippines, Java and other parts of the Malayan region, Papuasia, Australia, New Caledonia, Mexico, and part of Middle America, South America, the Antilles and Africa. "Each institution with which Merrill became associated," wrote one of his colleagues, "was rapidly enriched with new collections, due to his stimulation. The flow of materials sometimes became a flood, and, in an instance or two, threatened to submerge all available space where he was located." This was true at Harvard, for the herbarium-building of the Arnold Arboretum soon after Merrill's arrival became inadequate for storing the collections. Recent developments resulting in the partial or total shutting off of large parts of the world, perhaps for many years, to scientific exploration, has proved how foresighted Merrill was, but there were not a few who were dismayed and worried over the flood of materials so vast that most of it could but be stored away for future generations to study. In a decade the herbarium was increased by 220,000 specimens.

During this period, Merrill published profusely and edited facsimile editions of early botanical treasures such as Gronovius' *Flora virginica* and Walter's *Flora caroliniana*, as well as several works of Rafinesque. His early interest in economic and historical botany was rekindled, and he wrote a number of articles — such as "Domesticated plants in relation to the diffusion of culture", "The phytogeography of cultivated plants in relation to the assumed pre-Columbian Eurasian-American contacts" — which have already significantly influenced thought in ethnobotanical writings. Merrill was likewise most active during the war as a tropical consultant to the Secretary of War, writing for the survival programme of the armed forces his "Plant life of the Pacific world", a manual of poisonous and food plants of the jungles of the Pacific area.

Merrill was retired by the Harvard Corporation from his administrative post on July 31, 1946 in his seventieth year and four years over the retirement age for administrative officers. He continued as Arnold Professor of Botany until 1948, when he became Arnold Professor Emeritus, carrying on his own research both at Harvard and abroad, putting in long hours of work in spite of age and failing health.

One of his major contributions of this post-retirement period is his book: "The botany of Cook's voyages". It deals critically and mercilessly with the extravagant theories which some recent geographers and anthropologists of the ultra-diffusionist school were basing on warped, erroneous or misinterpreted "evidence" — theories concerned especially with the origin and dispersal of certain economic plants. This work actually had its origin in 1950, when "anthropological friends" asked him to sum up the case against new diffusionists, and when, shortly afterwards, one of the diffusionists challanged him to prove his position. A trip to London in 1951

afforded him the opportunity of studying the plants and old records of Cook's voyages, preserved in the British Museum. He found in this research so many unpublished details which had direct bearing on the problem of the distribution of economic plants that he resolved to make them available in print. In writing, the book grew into what is a rich compendium of all sorts of information having to do with the history of cultivated and economic plants and a most thoroughly devastating exposé of the shoddiness of much of the modern writing in this field. During the writing of this book, Merrill was taken seriously ill, and it had to await his recovery. No sooner was work resumed than he suffered a relapse and was able to complete the book only under great travail in 1954. Several of his colleagues assisted him in an editorial capacity, but the book itself, a monument to the determination of a scientist exasperated with prevalent half-truths, was entirely his product. In spite of its rambling and verbaceous character — a defect which Merrill himself recognised and for which he apologised as due to his "decline in physical and mental capabilities" brought about by age and infirmity — it has been most glowingly reviewed in America and abroad. Shortly after the publication of the volume, he entered into a rapid decline and suffered several severe shocks that incapacitated him completely.

Besides the several great schools, herbaria and gardens which owe so much to Merrill's efforts, he left more than 500 published papers and books. Two of the greatest of his works are the "Bibliography of Eastern Asiatic Botany", published jointly with Dr. E. H. Walker of the Smithsonian Institution in 1938 and his *Index Rafinesquianus*, published in 1949.

During the latter part of the war years, a committee of Harvard botanists, appointed by Merrill and the Chairman of Harvard's Department of Biology, Professor Alden Dawson, began to study anew the possibilities of coordinating botany at the University. After a detailed examination of Harvard botany and its needs under the new circumstances of the post-war period, an overall plan to bring all of Harvard's herbarium and library facilities together in fireproof quarters in Cambridge was submitted to the Corporation and accepted. A number of Merrill's ideas of the pre-war period were incorporated in modified form. Merrill, at first enthusiastically in favour of the plan, gradually came to fear that it would mean the end of taxonomy at Harvard, and to believe that it was not in the best interests of the Arnold Arboretum. After his retirement as Director, he opposed it strongly and, in spite of failing health, continued to do so actively through the remaining years of his life. The fact that the University put the final plan into effect, his opposition notwithstanding, combined with his lingering illness to make the last few years of his life somewhat unhappy, quite in contrast to the buoyant spirit of his earlier years.

His honours were many. He received honourary degrees from several universities: Doctor of Science from the University of Maine in 1926 and from Harvard University in 1936, and Doctor of Letters from the University of California in 1936 and from Yale University in 1951. A singular honour was the publication, in 1946, by Chronica Botanica of *Merrilleana*, a collection of his outstanding writings. In 1939, he was given the gold medal of the French Ministry of Agriculture and a diploma from the Société Nationale d'Acclimatation. In the same year, the Linnean Society of London, of which he was a Foreign Member, decorated him with its medal; he was the first American botanist so to be honoured. In 1950, there came to him the Geoffrey St. Hilaire medal and the high honour of Commander in the Netherlands Order of Oranje Nassau. The New York Botanical Garden gave him its Distinguished Service Award in 1952.

During his long and active career, he served as one of the Presidents of the

Section of Taxonomy & Nomenclature of the Sixth International Botanical Congress in Amsterdam (1936) and of the Seventh in Stockholm (1950); as President of the American Association for the Advancement of Science (1931), the Botanical Society of America (1934), the New England Botanical Club (1937-1939), the Botanical Society of America (1934) and the American Society of Plant Taxonomists (1946). In 1935, he served as President of the International Union of Biological Sciences. He held membership in many scientific societies, including: American Academy of Arts and Sciences (Fellow); American Philosophical Society; Philadelphia Academy of Natural Sciences; National Academy of Sciences; Académie des Sciences de l'Institut de France (Correspondent); Torrey Botanical Club; Sigma Xi; Phi Beta Kappa; Alpha Zeta; Phi Kappa Sigma; Royal Horticultural Society of London; Edinburgh Botanical Society; Royal Society of Edinburgh; Universidad Nacional de La Plata (Académico Honorário); Malayan Branch of the Royal Asiatic Society; Deutsche Botanische Gesellschaft; Muséum National d'Histoire Naturelle of Paris (Correspondent); Nederlandse Botanische Vereniging; Kon. Nederlands Aardrijkskundig Genootschap; Naturhistorisches Museum of Vienna (Correspondent); Svenska Vetenskaps Akademien; Institut Genevois; Société Botanique de France; Japanese Botanical Society; Peking Society of Natural History and Royal Agricultural and Horticultural Society of India. In 1936, he was official guest of Harvard University at its Tercentenary Celebration. For a number of years, he served as a member of the Latin American Committee of Selection of the John Simon Guggenheim Foundation. He served at various times as a member of the board of directors or as trustee of a number of institutions and societies, such as the Escuela Agrícola Panamericana in Honduras, the Gorgas Memorial Institute and the New York Horticultural Society.

Physically, Merrill was small and wiry, with commanding and penetrating eyes arched over and set off by bushy eyebrows. His voice was sharp and clipped, characterised by a lasting and unmistakable Maine accent; his speech frank and blunt. He was prone to make quick, on-the-spot decisions. From earliest youth he was possessed of an unsatisfiable drive sometimes approaching brashness — the key to his great achievements. It was that drive so characteristic of Maine people — whether they spend their lives on their native farms or whether, like Merrill, they travel to parts foreign. It was that drive which, in an earlier period, sent the Maine clipper ships to all corners of the earth. And there is much in Merrill's career — his urge to see new lands, to seek out the unknown, to build great institutions for future generations — that can be likened to the fast ships that formerly took the name, the drive, the spirit of Maine all over the globe. For, though Merrill left his native habitat early in his career and never returned to practice his profession there, he remained always a State of Mainer. As a New Englander myself, I cannot, in my mind, divorce the man, his personality and his achievements from the Maine that was in his blood.

Partly because of his strong individuality, Merrill probably struck his associates and colleagues in a great variety of ways, and each will remember his personality from a different facet. Merrill taught no courses, but he had a sympathetic interest in students. I first met him when I was a graduate student at Harvard under the late Professor Oakes Ames. I was examining a specimen in the Economic Herbarium of Oakes Ames when Merrill happened in. At once, he began a conversation of some twenty minutes about the species, how it grew in the field, what botanists were thinking about it and, most important of all, what still remained to be learned about it. It was this last part of the conversation, which he carried on with sharp twinkling eyes, that thrilled the student with the urge to go ahead and explore the unknown, a climax to which, I am now convinced, he led up with deliberate design.

He ended by inviting me to drop in and chat whenever I happened to be at the Arnold Arboretum, and I found throughout my student years that, busy man though he was, he was never cloistered beyond the reach of students and younger botanists.

Merrill often made quick appraisals of a man's promise in botany. Whenever circumstances permitted it, he went out of his way to help those who he felt showed promise, and many are those who owe their start or continuance in the botanical field to his willingness to sponsor or finance their work.

His drive and audacity occasionally irked some of his more reserved colleagues, a few of whom may have thought of Merrill as boastful or vain; but most of those who were so disturbed would have agreed that he was convinced in his own mind of the long-range right and justice of his viewpoint.

It has truthfully been pointed out that in his botanical work Merrill "seldom went far below the surface, being content in most instances, with identifying the plants with which he dealt. In this respect, he was one of a small group of floristic taxonomists of which there are few remaining. This type of taxonomic research was suitable to the region of his study and was the only approach that would have permitted him to cover the ground that he did in his lifetime." It is exactly this characteristic ability to deal superficially with extraordinarily large numbers of plants that makes so apt the epithet "the American Linnaeus" which has been applied to him. Merrill, quite unlike some of his contemporary taxonomists, was not disdainful nor distrustful of the newer approaches in botanical work, and, while admitting his desire to step beyond systematics, he realised that it would not be possible, with the magnitude of the problems he had set as his goal.

One of the most astounding aspects of Merrill's entire career was the paucity of formal instruction in botany which he received. "There are few prominent scientists of the present era," one of his colleagues at Harvard has written, "who are so nearly self-taught in the field of their prominence as was Elmer Drew Merrill, whose total formal training in botany included but two one-semester courses taken as undergraduate...." Yet perhaps the true systematist — at least one so active as Merrill — must, in a sense, be self-taught. Merrill rarely preached, but I have heard him say to students on several occasions: "The hours you spend in the field, the herbarium and the library are worth three times those you spend in the classroom, no matter who your professor may be." Merrill was training himself until the very last, even when, bedridden, he would read large tomes in anthropology, geography and biology in his race with death to finish "The botany of Cook's voyages". And crippled and weak though he was, he thrilled to every new discovery which he made in his reading, regretting that he had no time left him to write even more papers on the variety of topics he had covered in this, his last, research.

And the final point which any appreciation of Merrill must bring out is his international outlook. I think that it is fair to say that he was ahead of all of his contemporaries in the ample viewpoint so essential to the true global botanist. Merrill rarely gave the impression of trying to be international; it seemed to be as natural to him as his urge, in later years, to vacation in his Maine woods. He was not entirely convinced that international organisations and commissions would provide the best avenue for international cooperation; but of the value of personal travel abroad, study in foreign centres, attendance at botanical congresses, he had not the slightest doubt; and one of his preoccupations as administrator was that opportunity for travel and foreign study be made available to him and his associates. All of us agree that Merrill was an outstanding internationalist in botany, but I venture to predict that the full impact of the international emphasis of his work will not wholly be appreciated for a quarter of a century. His influence as an international figure in botany will grow with the passing of the years.

"WHAT IS THE SUBSPECIES?"

compiled by

R. D. Meikle (Kew)

A meeting of the Systematics Association was held in the rooms of the Linnean Society, London, on March 8th, 1956, to discuss this question. Zoologists and botanists were present together, and a synopsis of the views held by the principal speakers is given below. Most of the discussion ranged over the more general aspects of the subspecies problem, and is therefore likely to be of equal interest to all taxonomists, whether zoologists or botanists, but it is hoped that readers of "Taxon" will not object to the inclusion in their journal of a few paragraphs primarily of zoological interest. One of the objects of the Systematics Association is to encourage joint discussion of problems common to systematic zoology and systematic botany, and it has been generally agreed that such discussions are of mutual value.

Prof. J. Heslop-Harrison pointed out that there are unambiguous answers to the question "What is the subspecies?" in the International Codes of Botanical and Zoological Nomenclature, and that the subspecies is merely one of the categories of taxa recognized in the International Codes — that below the rank of species. The really important question is not "What is the subspecies?" but rather "What types of natural variational units may for the purposes of classification, most appropriately be allocated to this category of the taxonomic hierarchy?" The speaker defined variational unit as "an assemblage of individual organisms which may be grouped together and defined by characters, properties, attributes of any type which they display in common". Units which are simultaneously morphologically distinct from all others and reproductively isolated to a greater or lesser extent by factors other than distributional are best accepted as species; taxa which fall within or cut across that natural genetical unit — the local breeding population — are appropriately ranked as varieties. Between these limits falls the subspecies. Prof. Heslop-Harrison mentioned three situations where the use of subspecific rank is most frequently encountered:

1. The *Rassenkreis* or geographical subspecies, consisting of a sequence of populations replacing each other geographically, sometimes separated by a topographical barrier, sometimes intergrading over an intervening zone of greater or lesser extent. All the populations have so much in common that they are obviously the regional representatives of a single species — normally they are interfertile. Such regional subspecies may differ from each other only statistically, or their regional characteristics may be well developed so that each individual can readily be attributed to its taxon. In either situation, the speaker felt that the appropriate rank was still subspecies if the different populations were indeed vicarious, though where clear variational discontinuity existed, he was prepared to admit that some authors would prefer to regard the units making up each population as distinct species.

2. The *ecotype* — where the dissimilar populations replace each other in different habitats, but without necessarily having distinct geographical distributions. It is not imperative that all such infraspecific variants should be fitted into a taxonomic framework, but *if* units of this type can be recognized within species and *if* it is thought desirable to give them taxonomic status, the subspecies is probably the most appropriate rank.

3. "Segments" or subdivisions of a species which are partly or completely intersterile without showing any substantial degree of morphological differentiation. Such intersterility may be due to cytological causes, or it may be genic. Since the elements cannot clearly be separated morphologically, it is inappropriate to name them as species, so that if nomenclatural recognition is deemed necessary, it seems reasonable to accept them as subspecies.

Other variational units might also merit the use of the subspecies category, and Prof. Heslop-Harrison emphasized the importance of remembering that the "subspecies" has no real existence in the world independent of man, but that it includes all sorts of different natural groupings which, for the purposes of classification, are most conveniently given the rank we choose to term subspecies.

Dr. A. J. Cain recognized the importance and convenience of the geographical subspecies in providing a rank for populations which for various reasons, cannot be considered specifically distinct; where apparently distinct species are found to be connected by intermediate or intergrading populations, or where (as with insular populations) the differences between populations are slight, though taxonomically recognizable, the subspecies may be a useful category. The abuse of anything does not take away its usefulness, and because some taxonomists have described subspecies on the slightest possible differences, it does not follow that there is no use in this category.

There are, however, certain inherent disadvantages in the use of the term:

1. Populations are not always clearly demarcated, and where local variants of a single widespread population intergrade very smoothly it may, in practice, be impossible to decide where to make the subspecific boundaries. Any formal recognition of subdivisions within such a population may be misleading, and may obscure the actual state of affairs.

2. Where a widespread population shows several clines running through it in different directions, two taxonomists with different opinions as to which characters are the most important will start from the same material and produce totally different conclusions. Something is clearly wrong when this can happen.

3. There is no satisfactory standard for determining the lower limit of the subspecies; many taxonomists feel that "microgeographical" subspecies should not be recognized, but if the subspecies is used as a measure of spatial variation of populations within species, there is no sound theoretical basis for refusing to recognize those variants whose range happens to be very limited.

4. The upper limit of the subspecies is similarly ill-defined, and taxonomists have so far failed to establish satisfactory standards for the determination of specific and subspecific differences. Some forms which are extremely similar morphologically fail to interbreed when they meet in the wild, while other highly distinct forms hybridize when their ranges meet. Morphological distinctiveness is no sure guide to specific or infraspecific rank.

Dr. Cain concluded that the geographical subspecies was a makeshift which attempts (1) to describe complex and often continuous geographical variation in terms of discrete and monotypic entities and (2) to express a certain range of degrees of taxonomic similarity (and thereby to map the diversity of populations within the species) while, at the same time and on the same evidence, determining subspecific as against specific rank — two different and not concordant aims. He

felt further discussion of the subspecies would be largely fruitless until taxonomists tried to make the concept of affinity and the degrees of taxonomic differences precise and quantitative. When that had been done, there would be no need for dual-purpose entities such as the geographical subspecies is at present.

Dr. S. M. Walters examined the actual use of the subspecies in the Clapham, Tutin and Warburg "Flora of the British Isles" (1952) and found that it was employed in three circumstances:

1. For *geographical* subspecies, where, despite practical difficulties in delimitation, it is generally accepted.

2. For *cytological* subspecies — a more problematic use — for it is often difficult to decide whether cytodemes should be given specific or subspecific rank. Dr. Walters suggested, purely on grounds of practical convenience, that where 90% of reasonably complete specimens could be assigned to one taxon or another without the use of a microscope, then the taxa should be given specific rank; where microscopic examination was necessary, then subspecific rank was more appropriate.

3. For "*ignorance*" subspecies, where the taxa are inadequately understood and await further examination.

As with the use of "species" it was neither necessary nor desirable that subspecies should be genetically or in any other way strictly comparable units. The chief consideration in taxonomy should be convenience, and taxonomists should aim at providing useful, general-purpose classifications.

Dr. M. Burton, referring to the classification of Sponges, remarked that the discrimination of species is in itself so difficult that the concept of a subspecies is apt to be valueless. Too often it has represented no more than a slight deviation in one or more characters from those of the previous individual examined by a particular taxonomist. There is the possibility, however, that certain forms of *Sycon* may indicate how the concept may be applied.

The common *Sycon*, a marine sponge of the British Isles, known alternatively as *S. ciliatum* and *S. coronatum*, is considerably more variable than is normally assumed. When a hundred specimens from a given locality are compared and the variations assessed, it becomes evident that we must treat as synonyms about one hundred and twenty-five named forms, belonging to several genera in addition to *Sycon*, distributed over the whole world. Even when such a drastic merging is made we are still left with a species characterised by a relatively stable outward form, for this multitude of species has been distinguished largely upon skeletal characters. Individuals assigned to this comprehensive species may vary from a few millimetres to 160 mm. high, but they are all tubulo-cylindrical with a more or less papillate surface rendered hispid by bunches of oxea (needle-shaped spicules). The oxea may vary much in length but the maximum thickness is seldom more than 0.025 mm.

There are, in addition to all these, a number of individuals, bearing a variety of specific names, which depart from the *S. ciliatum*-group in two features only. They are all more ovate in form, and the oxea are fewer in number but those few are more robust. At first, it looks as if we have to do with two distinct and well-marked species, especially since these robust ovate specimens are confined to sub-tropical and tropical seas, within a more or less equatorial belt running round the earth. Young individuals are, however, indistinguishable from *S. ciliatum* in form, and there are occasional adult individuals which are intermediate between

S. ciliatum and the more extreme robust forms. Occasional individuals are also found, both within and outside the equatorial belt mentioned above, which are intermediate in the dimensions of the oxea. Any rigid distinction is therefore impossible, and the best we can say of the total situation is that among subtropical and tropical individuals of the cosmopolitan species, *S. ciliatum*, there is a tendency to a more squat form and more robust, and fewer, oxea. These, it seemed, might constitute a subspecies.

Prof. T. G. Tutin agreed with the views of previous speakers (except Dr. Walters). He suggested that a possible definition of a subspecies might be: "taxa differing from one another in minor morphological characters, occupying distinct areas (though sometimes with a zone of overlap) or else isolated ecologically, but potentially capable of interbreeding without substantial reduction in fertility". The degree of morphological differentiation is important, because isolated populations can diverge widely without any selection for inter-sterility occurring, e.g. *Platanus orientalis* and *P. occidentalis* — and many orchid species, in which the barrier to interbreeding is extreme specialization of pollination mechanism, not a genetical one; such taxa may nevertheless be regarded as species since interbreeding does not occur in nature and morphological differentiation is considerable. Prof. Tutin felt that whether the morphological differences between subspecies or between species were observable with the naked eye or only with the compound microscope was a matter of no real importance, but only of minor practical convenience.

Dr. T. Clay spoke on the difficulties of the subspecific concept in the Mallophaga, ectoparasitic insects of birds. Series of related host forms frequently have morphologically separable allopatric populations which might be considered as subspecies. Owing to the isolated position of each form there are no criteria for separating the species and the subspecies, and therefore a somewhat arbitrary decision must be made on morphological characters only. Further owing to doubt about the exact relationship between some of the hosts there is often no distributional evidence as to which forms are likely to be the most nearly related.

Dr. R. Melville pointed out that Prof. Heslop-Harrison was using the term subspecies as a dumping ground for taxa of varying rank. In recent years there had been a tendency, manifested more in the Universities than in the large herbaria, to degrade the terminology of taxonomy. What had formerly been called a 'form' was now called a variety and the variety had become a 'subspecies', while varieties and subspecies had been elevated to specific rank. This tendency was deplorable and could lead only to confusion. In his opinion, Du Rietz had correctly defined the subspecies as a group of related varieties having a regional distribution. Du Rietz had also used the term variety in a topographical sense, but it was convenient to employ this term for taxa differing in several characters from others of similar rank. The term 'form' should be retained for taxa, such as the white flowered variants of blue flowered plants, or the pendulous variants of trees such as the beech, which probably differed in only a single gene from their relatives. Prof. Heslop-Harrison had raised such a variant (*Dactylorchis incarnata* ssp. *ochroleuca* (Boll.) H. Harr. f.) to a subspecies. This was making nonsense of our terminology.

THE GENERIC NAMES PROPOSED FOR HYMENOMYCETES—VII
"Thelephoraceae"

(conclusion) *

M. A. Donk (The Hague)

[*Omorrhiza*.—See *Omoriza*.]

Pachysterigma J.-Olsen *apad* Bref., Unters. Gesamtgeb. Mycol. **8**: 5. "1889" [1888]. — Etymology: παχύς, thick; sterigma. Gender: n. — Type species (selected): *Pachysterigma fugax* J.-Olsen apud Bref.—This species is now considered a synonym of *Tulasnella violea* (Quél.) Bourd. & G.; compare Rogers (*in* Ann. mycol. **31**: 184. 1933). — Scope: Introduced for four species, of which *P. fugax* was the first. — Typification. The first species is here selected. Brefeld said, "... ist wohl die ausgeprägteste Form." — Typonyms: *Tulasnella* J. Schroet. (1888) and *Prototremella* Pat. (1888), both earlier names; and compare *Muciporus* Juel.

[*Pellicularia* Cooke *in* Grevillea **4**: 116, 134-135. 1876; Report on diseased leaves of coffee (Ind. Mus. Rep.: Pl. S. India) 1-7. 1876; *in* Pop. Sci. Review **15**: 165. 1876. — Type species (only original species): *Pellicularia koleroga* Cooke.—As described by Cooke consisting of a resupinate hymenomycete (as yet without a correct name?) pervaded by an imperfect fungus, which contributed the spores seen by him; in addition, much stress was laid on a gelatinous matrix that presumably did not exist. — As a nomen confusum, impriorable. If one of the components of the *mixtum compositum* were to be selected as the type this could hardly be the hymenomycete as was done by Rogers, but rather should be the pervading imperfect fungus. For a detailed account, see Donk (*in* Reinwardtia **2**: 425-434. 1954).]

Peniophora Cooke *in* Grevillea **8**: 20. 1879. — Etymology: πηνίον, shuttle; φέρω, I bear. Gender: f. — Type species (selected): *Corticium quercinum* (Pers. ex Fr.) Fr. — Scope. Based on 16 species. First species *Corticium quercinum*. — Typification. Of the 16 original species the author himself indicated number 15, "*P. velutina* Fr.", as "rather an aberrant form", and number 16, "*P. sparsa* (B. & Br.)", as "another aberrant form"; they should be excluded as eligible species. Three other species are at present considered as members of *Stereum* Pers. ex S. F. Gray or *Lloydella* Bres.; *Peniophora "habgallae"* (*hakgallae*) (Berk. & Br.) Cooke belongs to *Aleurodiscus* Rabenh. ex J. Schroet. Passing two or three more species of which I am not quite certain as to their identity, the remainder of the species belongs to *Peniophora* as treated by Bourdot & Galzin (Hym. France 267. 1928). One of them is *Corticium quercinum*, the first species, perhaps the best known, the most characteristic, and the commonest in western Europe of all the original ones. It was suggested as the type species by Clements & Shear (Gen. Fungi 345. 1931), and Donk (*in* Bull. bot. Gdns Buitenzorg III **18**: 141. 1949) felt bound to accept this choice. — Remark. The genus currently called *Peniophora* Cooke is a considerable one and comprises among its species the types of two earlier and priorable generic names, viz. *Corticium* S. F. Gray (1821), q.v. and *Hyphoderma* Wallr. (1833), q.v. Therefore, Donk (*op cit.* pp. 140-142) proposed it for conservation against these two names. Rogers (*in* Farlowia **4**: 30. 1950) recommended rejection, but erred as to the nomenclatural basis of his motives, which he had to admit as wrong (Rogers, [mimeographed enclosure to the reprint of his article]. 1950). Yet, it seems that he would rather restore the name *Corticium* S. F. Gray than maintain *Peniophora* for a group containing the common type of these two names. A much reduced genus including *P. quercina*, will eventually turn out to coincide almost completely with *Peniophora* sect. *Coloratae* Bourd. & G.; compare Eriksson's excellent treatment of this section [*in* Symb. bot. upsal. **10** (5): 76 pp. 25 *fs.* 1950]. I believe that few mycologists will favour the reintroduction of the generic name *Corticium* S. F. Gray for this reduced, or for a more inclusive, genus *Peniophora*. Compare also Donk (Summ. Prop. 8. 1950). Yet, the proposal was rejected by ballot by the

*) Continued from p. 85.

32. 1953; *in* Mycologia **45**: 320. 1953). — Typonym: *Corticium* S. F. Gray (1821), q.v. Special Committee for Fungi (*in* Taxon **2**:

Peniophorella P. Karst. *in* Bidr. Känn. Finl. Nat. Folk **48**: 427. 1889 (German translation of Swedish description *in* Bot. Cbl. **43**: 384. 1890). — Etymology: diminutive of *Peniophora*. Gender: f. — Type species (only original species): "*Peniophorella pubera* (Fr.?) Karst."—The identity of this species, as interpreted by Karsten, is unknown at present, and no specimens seem to be preserved in Karsten's herbarium (cf. Von Höhnel & Litschauer *in* S.B. Akad. Wiss. Wien, Mat.-nat. Kl., Abt. I, **115**: 1564. 1906). — Status. I have my doubts as to the nature of the type, and consequently have to regard *Peniophorella* as a nomen dubium.

[*Peniophorina* Höhn.—See "Cyphellaceae".]

Peniotulasnella Bourd. & G., Hym. France 65. "1927" [1928]. — A provisional name, accompanied by a descriptio generico-specifica and published as a part of the combination "*Peniotulasnella conspersa* p.t." The abbreviation apparently stands for 'pro tempore' with the meaning of 'provisionally'. The authors stated that they were not quite sure that the basidia were really as in *Tulasnella* ("avec basides à peu près sûrement tulasnellées").

Perona Pers. ex Fr.—See "Agaricaceae".

Perona "Fr." — Saccardo (Syll. Fung. **6**: 521. 1888) and several subsequent authors have cited a genus "*Perona* Fr." as a synonym of "*Hypolyssus* Pers. . . . emend. Berk", thus recognizing the existence of a genus different from *Perona* Pers. ex Fr., but with a homonymous name. Fries, once, used this name as follows:

> "*Perona*. Berkl. in Hook. Lond. Journ. I. p. 39. **) Pileus suberosus, hymenio laevissimo rimoso."—The footnote: " **) Quatenus hoc genus sine charactere generico l.c. propositum intelligo, hoc loco inseratur tumquam Cyphellae analogum in seq. sectione."—Fries (Summa Veg. Scand. **2**: 333. 1849).

When one looks up "Berkl. in Hook. Lond. Journ. I. p. 39" one will find (on page 139!) the description of a new species, *Hypolyssus montagnei* Berk. under the generic name "*Hypolyssus*, Pers.", q.v., but not the name *Perona*. This explanation has been offered:

> "[It] is only by a set of curious circumstances that the name *Perona* ever came to be used in this connection. For it is not a Berkeleyan genus, nor a Friesian, but a Persoonian, published in Mycol. Eur. **2**: 3. 1825. Fries seems to have had a general idea that Berkeley had revived one of the small genera from Persoon's Mycol. Eur., but to have picked out the wrong name, cited the wrong page for Berkeley's publication, ... and finally tried to make amends in the index to the Summ. Veg. Scand. [p. 568, "*Hypolyssus* B. (*Perona*)"]. In any case it is not *Perona* Fr. ..., but '*Perona* Pers.' erroneously ascribed to Berkeley by Fries."—Rogers (*in* Farlowia **3**: 452. 1949).[30a])

It is also possible that Fries was convinced that Berkeley had erred and had revived a wrong name of Persoon. It may even be that Fries introduced a new name, *Perona*, in which case it would be a later homonym of *Perona* Pers. ex Fr., and, therefore, impriorable. However, for the moment Rogers's explanation seems preferable.

[*Pezicula* Paul., Traité Champ. **2**: index. 1793; for corresponding description and French name (Coccigrue), see p. 403). — For some remarks on Paulet's work and scientific names, see under *Agarico-carnis* Paul. ("Polyporaceae"). — Introduced with five species, a varied assortment of fungi of which only the second is a hymenomycete: *Pezicula cornucopioides* (L.) Paul. = *Omoriza cornucopioides* (L.) Paul. = *Craterellus cornucopioides* (L. ex Fr.) Pers. Afterwards, in his "Iconographie", Paulet 'transferred' two of the original species to *Omoriza* Paul., q.v., (including *C. cornucopioides*), and to the other three he did not give Latin names. There appears to be little reason to select the one member of *Craterellus* as the type species of *Pezicula*, and thus this devalidated name is here considered as falling outside the sphere of this series. — Not *Pezicula* Tul. (1865; nomen nudum) ex Sacc. 1884 (*in* Bot. Cbl. **18**: 217); Dermateaceae, Ascomycetes).]

Phaeophlebia W. B. Cooke *in* Mycologia **48**: 401. 1956. — Etymology: φαιός, dusky; the genus *Phlebia*. Gender: f. — Type species (by original designation and only original

[30a]) Rogers also correctly stated that Fries "missed the diagnosis given by Berkeley (Fries wrote 'quatenus hoc genus sine charactere generico l.c. propositum ...')."

species): *Phlebia strigosozonata* (Schw.) Lloyd. —As interpreted by the author of the generic name, inclusive of *Phlebia rugosissima* Lév. — Typonym. Compare *Auricula* Lloyd (1922; preoccupied).

Phanerochaete P. Karst. *in* Bidr. Känn. Finl. Nat. Folk **48**: 426. 1889 (German translation of Swedish description *in* Bot. Cbl. **43**: 384. 1890). — Etymology: *φανερός*, distinct, *χαίτη*, hair. Gender: f. — Type species (selected): *Stereum alneum* (Fr.) Fr. sensu P. Karst.—For this species, see below. — Scope. Introduced with two species, *Stereum alneum* (Fr.) Fr. sensu P. Karst. (first species) and *Stereum odoratum* (Fr.) Fr. sensu P. Karst. The first is according to specimens distributed by Rabenhorst & Winter (Fung. europ. extraeur. No. 3231. 1885, as *Corticium alneum* Fr.; type distribution of *Peniophora karstenii* Mass.) closely related with *Peniophora velutina* (DC. ex Fr.) Cooke (cf. Karsten, Krit. Öfvers. Finl. Basidsv. Tillägg 2: 32. 1893); it was identified by Von Höhnel & Litschauer (*in* S.B. Akad. Wien, Mat.-nat. Kl., Abt. I, **115**: 1566, 1580. 1906) with *Peniophora velutina* and by Rogers & Jackson (*in* Farlowia **1**: 326. 1943) with *Peniophora coccineofulva* (Schw.) Burt. The second species, as understood by Karsten, is different from that of Fries; it has been called *Peniophora odorata* "(Karsten) Burt" (cf. Burt *in* Ann. Missouri bot. Gdn **12**: 289. 1925), an untenable name, and renamed *Peniophora luna* Romell by Rogers & Jackson (*in* Farlowia **1**: 320. 1943, to be consulted for particulars). Compare also Karsten (Krit. Öfvers. Finl. Basidsv. Tillägg 3: 33. 1898 = *in* Bidr. Känn. Finl. Nat. Folk **62**: 97. 1903). — Typification. W. B. Cooke (Gen. Homobas. 73. 1953) listed the first species as the type. — Typonym. *Xerocarpus* P. Karst., and compare *Corticium* Fr. (1835; preoccupied).

Phlebia Fr., Syst. mycol. **1**: 426. 1821. — — Etymology: *φλέψ*, *φλεβός*, vein. Gender: f. — Type species (selected): *Phlebia radiata* Fr. — Scope. Introduced with four species; three of these [*Phlebia merismoides* (Fr.) ex Fr., first species, *Ph. radiata* Fr., and *Ph. contorta* Fr.] are now often taken to be conspecific. The fourth species is *Ph. vaga* Fr., the type of the genus *Phlebiella* P. Karst., q.v. — Typification. The type species was indicated by Fries himself (Elench. **1**: 155. 1828; under *Ph. radiata*): "Haec species typus generis *Phlebiae!*" — Rogers (*in* Farlowia **3**: 438. 1949) argued that Persoon, when establishing *Ricnophora* Pers., q.v., excluded *Ph. radiata* and *Ph. contorta* and that since "*P. vaga* was later made the type of Karsten's genus *Phlebiella* ... it would be logical and in accord with established custom to designate (provided no intervening decisions oppose) the other eligible species, *P. merismoides* Fr. as the type of *Phlebia* Fr." It should be remarked that Persoon said that *Ph. radiata* and *Ph. contorta* probably belonged to *Ricnophora*[31]); he certainly did not definitely include them in his genus and thus did not definitely exclude them from *Phlebia*. He admitted that he did not know any of Fries's species! In the present case there need not be much discussion on this question since Fries indicated the type of his own generic name in his "Elenchus", a work to be taken as part of his "Systema", the starting-point book of these fungi. Banker (*in* Bull. Torrey bot. Cl. **29**: 440. 1902) accepted *Merulius merismoides* Fr. [1818] as the type species. — Typonym: *Ricnophora* Pers. (1825). — Remark. See also the discussion on the (rejected) proposal for conservation of *Corticium* Fr. (1835).

Phlebiella P. Karst. *in* Hedwigia **29**: 271. 1890 (as *Phlebriella*). — Etymology: diminutive of *Phlebia*. — Gender: f. — Type species (only original species): *Phlebia vaga* Fr.—This is apparently the same as *Corticium sulphureum* Pers. (non Fr.?) as described by Bourdot & Galzin (Hym. France 234. 1928) = *Hypochnus fumosus* (Fr. ex Pers.) Fr. sensu Burt (*in* Ann. Missouri bot. Gdn **3**: 239. 1916). Compare also Karsten (*in* Medd. Soc. Fauna Fl. fenn. **14**: 83. 1887): "*Phlebia vaga* Fr. circa Mustiala pluries, sed semper sterilis, autumno seriore lecta. Similitudinem cum *Odontia fimbriata* maximam ostendit. Vix vere *Phlebia*." — Variant spelling. The original spelling, *Phlebriella*, is evidently an error and must be corrected; Karsten also wrote "*Phlebria vaga* Fr." on the same occasion.

Phlebophora Lév. *in* Ann. Sci. nat. (Bot.) II **16**: 238. 1841. — Etymology: *φλέψ*, *φλεβός*, vein; *φέρω*, I bear. Gender: f. — Type species (only original species): *Phlebophora campa-*

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[31]) "*Phlebia radiata*. Fries ... et ejusd. *Phlebia contorta* ... verosimile huc pertinent, nec vero *Phleb. Merismoides* et *vaga*, quae ad auctoris genus reservari possunt, mihi vero ignotae."—Persoon (Mycol. europ. **2**: 8. 1825).

nulata Lév.—This was based on abnormal specimens, but not, it would appear, on specimens deformed by the parasitism of an imperfect fungus. The normal condition is now accepted as belonging to *Tricholoma,* perhaps to *T. resplendens* (Fr.) P. Karst. in the sense of French authors, like Quélet, a species now called *T. sulphurescens* Bres. (according to Konrad & Maublanc, Ic. sel. Fung. **6**: 301. 1935). Compare Roumeguère (*in* Rev. mycol. **8**: 28-30. 1886) and Quélet (Ench. Fung. 10. 1886; Fl. mycol. France 287. 1888). — Remarks. Clements & Shear (Gen. Fungi 351. 1931) suggested *Phlebophora rugulosa* Lév. as the type species. This is not acceptable, because that species was not originally included and described at a later date. — Donk (*in* Bull. bot. Gdns Buitenzorg III **18**: 112. 1949) pointed out that *Phlebophora* may have to be added to the nomina rejicienda of *Tricholoma* (Fr.) Staude, q.v., and Singer (*in* Lilloa **22**: 737. 1951) is of the same opinion: "If *Tricholoma* is not conserved *Phlebophora* may replace it." — Status. If considered as based on a monstrosity (the best course in my opinion), *Phlebophora* is impriorable (nomen monstrositatis; Art. 67).

Phlebriella.—See *Phlebiella.*

Phylacteria (Pers.) Pat., Hym. Europe 153. 1887. — Etymology: *φυλακτήριον,* amulet. Gender: f. — Type species (selected): *Thelephora caryophyllaea* (Schaeff.) ex Fr. — Protonym: *Phylacteria* Pers., Traité Champ. comest. 43, 70. 1818.—Introduced as a nomen provisorium:

> Page 43: "... les Théléphorées .... Les genres qui la composent sont ... les *Merisma, Thelephora* (*Corticium*), *Phyllacteria* [32]), *Conisophora* [32]) et *Auricularia* ...."
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> Page 70: "Peu d'espèces du genre *Thelephora* sont terrestres et celles-ci pourroient en être détachées un jour, comme un genre particulier, non pas à cause de la localité et de la substance plus molasse, mais par une particularité dont je ne peux encore deviner le but. Dans l'état frais, on remarque sur la partie sporulifère des *Thelephora caryophillea* [32]) (Bull., t. 483) [33]), *Auricularia phyllacteres* [32]); Bull., t. 436, f. 2, et *Thel. caesia,* Syn. Fung., p. 509, de distance en distance des soies ou des papilles disposées quatre à quatre .... Au reste, ces champignons forment le passage au genre *Merisma,* qui a le port d'une clavaire ...." [34])—Persoon (*op. cit.*).

Basinym: *Thelephora* sect. *Phylacteria* Pers., Mycol. europ. **1**: 111. 1822.—Five species were included: *Thelephora caryophyllaea* (Schaeff.) ex Fr., *T. terrestris* Ehrh. ex Fr., *T. palmata* Pers. [not *Merisma palmatum* (Scop. ex Fr.) Pers. = *T. palmata* (Scop.) ex Fr.], and *T. fusco-cinerea* Pers. (including *Auricularia phylacteris* Bull.). Persoon did not mention *Phylacteria* 1818. — Patouillard called his genus "*Phylacteria* (Pers.)" and in 1900 (Essai taxon. Hym. 119), "*Phylacteria* Pers. Mycol. Europ., I, p. 111", which makes Persoon's sectional name of 1822 the avowed basinym, rather than the provisional generic name of 1818. — Scope: "Espèces principales: *Ph. atro-citrina, Ph. caryophyllea, Ph. intybacea, Ph. laciniata, Ph. anthocephala,* etc." —Patouillard (*l.c.,* 1887). — Typification. The only species common to *Phylacteria* Pers. (1818) and to Patouillard's genus is *Thelephora caryophyllaea,* and to Persoon's section and to Patouillard's genus, the same species and also *T. laciniata,* which Persoon in 1822 included as a variety under the former name. I would suggest the selection of *T. caryophyllaea* for both Patouillard's generic name and its basinym. — W. B. Cooke (Gen. Homobas. 75. 1953) chose *T. terrestris* Ehrh. ex Fr. for "*Phylacteria* Pers. ex Pat.", but that species is not mentioned by Patouillard. Although *Thelephora laciniata* Pers. ex Fr. and *T. terrestris* are currently considered to be synonyms, it is impossible to select *T. terrestris* because it was originally not definitely included by Patouillard. From his work it appears that Patouillard consider-

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[32]) Spelling is that of the original. Fries's spelling in 1821 is "caryophyllaea".

[33]) The citation of Bulliard's plate may be explained in this case as the most likely choice of an illustration in a popular French booklet on edible fungi at that time. The plate is not typical of the species for which it is cited and Persoon so indicated it later on (Mycol. europ. **1**: 112. 1822: "mediocris"): in fact it represents *T. terrestris* Ehrh. ex Fr. in its modern sense.

[34]) For German translation, see Pers., Abb. essb. Schwämme 27, 44. 1822.

ed the two as distinct species (cf., for instance, Essai taxon. Hym. 119. 1900). — Remark. Neither Persoon (1822) nor Patouillard mention *Thelephora* subgen. *"Phylacteria.* Pers. Ch. Comm." of Fries, Syst. mycol. **1**: 449. 1821 [35]), which is an emendation of Persoon's taxon of 1818 in a different rank. Fries restricted it to resupinate species: (i) *Thelephora biennis* Fr. (a name change for *"Auric. phylacteris.* Bull. Ch. t. 436 ...", known to Fries from the cited plate only); (ii) *T. caesia* (Pers.) ex Fr.; and (iii) *T. crustacea* Schum. ex Fr. The obvious choice as type for this subgeneric name is *Auricularia phylacteris* Bull., which Persoon in 1822 (Mycol. europ. **1**: 114) reduced to the synonymy (as *A. "Phyllacteres"*) of *T. fusco-cinerea* Pers. var. *fusca* Pers. If Patouillard had not excluded the resupinate species, *A. phylacteris* would have been a serious possibility for selection. — Variant spelling: *"Phyllacteria"*; W. Brinkm. *in* Ann. mycol. **7**: 289. 1909. Typonym: *Scyphopilus* P. Karst. (1881).

Phyllacteria.—See *Phylacteria.*

Phyllocarbon Lloyd.—See "Agaricaceae".

Pleurobasidium Arnaud *in* Bull. Soc. mycol. France **67**: 193 *f. 1 B, C.* 1951 (nomen nudum). — Type species (by original designation and only original species): *Pleurobasidium telae* Arnaud (no Latin description). — No Latin generic description.

Podoscypha Pat., Essai taxon. Hym. 70. 1900. — Etymology: *πούς, ποδός,* foot; *σκύφος* cup. Gender: f. — Type species (selected): *Stereum elegans* (G. F. W. Meyer ex Fr.) Fr. sensu Patouillard [36].—From remarks published by Lloyd [Mycol. Writ. **4** (Stip. Ster.): 24. 1913] and Burt (*in* Ann. Missouri bot. Gdn **9**: 105. 1920) and from the determinations of specimens in herbaria, it appears that *S. elegans* is a much confused species with a number of widely different interpretations. It may be assumed that at the moment nobody really knows what it is. It is uncertain whether or not Meyer's type exists. It seems quite probable that Patouillard's interpretation of the species is not correct. His figures of *S. elegans* are also confusing as he shows cystidia protruding from the hymenium for up to half their length, which reminds one of species of *Cotylidia!* These protruding cystidia agree with Patouillard's generic description ("cystides saillantes ..."). Yet, it is still possible that his specimens belong to such species as possess gloeocystidia that rarely protrude and if they do it is only very slightly. — Scope. Nine species were mentioned as examples. — Typification. *Stereum elegans* is the name given to Patouillard's first species and the only one figured as an illustrative example. It has been selected as the type by W. B. Cooke (Gen. Homobas. 77. 1953). This choice is not a satisfactorily one in view of the doubtful identity of both the original specimen and Patouillard's interpretation as examplified by his figure. There is another reason; most mycologists who study the stipitate stereums prefer the retention of a genus *Podoscypha* for gloeocystidiate species, like *Stereum pergameneum* Berk. & C. apud Berk., *S. macrorhizum* (Lév.) Burt, or *S. surinamense* Lév., all of which are among Patouillard's original examples; of all three adequate type material is preserved. — Remark. Maire (*apud* Int. Rules bot. Nomencl., 3. Ausg., 123. 1935) proposed the conservation of *Podoscypha* against *Craterella* P. Karst., q.v. Donk (*in* Bull. bot. Gdns, Buitenzorg III **17**: 194. 1941) thought *Podoscypha* a taxonomically well marked group (and the proposal from this point of view superfluous). Moreover, he pointed out that if it were advisable to conserve *Podoscypha* indiscriminately for stalked stereums, the proposal had to be improved by the addition of several earlier names. Rogers (*in* Farlowia **3**: 471. 1949) concluded (only in connection with *Craterella)* that the proposal was not needed to preserve Patouillard's name. It was rejected by the Special Committee for Fungi (*in* Taxon **2**: 29. 1953: *in* Mycologia **45**: 313. 1953).

Podostrombium G. Kunze *ex* Reichenb., Consp. Reg. veg. 8. 1828 (nomen nudum). — A name never validly published as far as I am aware. It seems to have originated from an (effectively published?) herbarium-label, and appeared perhaps for the first time in print as a nomen nudum as "158. *Podostrombium* Kz. Fung. guian." (Reichenbach, Consp. Reg. veg. 8. 1828)—

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35) As *"Phyllacteria* [!] Pers. (subgen. *Thelephorae)"* in Fries's Index to the "Systema" (p. 141, 1832).

36) Mr. D. A. Reid has contributed most of the notes from which the remarks on this species and on the typification have been drawn up.

nothing else was added. Endlicher (Gen. Pl. 23. 1836), too, merely listed the name, with a reference to Reichenbach (1828). The next use is again by Reichenbach (Repert. Herb. s. Nomencl. 8. 1841), again as a nomen nudum ("*Podostrombium* Kze."). Léveillé (Consid. mycol. 119. 1846; *in* Dict. univ. Hist. nat. **8**: 491. 1846 [37]) also mentioned the name. All that the latter author said about it was, "*Podostrombium*, Kz. = *Hypolyssus Montagnei*, Berk." Since the reference is to a description of a species rather than to that of the genus or of the genus as a subgenus, section or other subdivision of a genus (Art. 39), it was doubtlessly not validly published by Léveillé either. Rogers (*in* Farlowia **3**: 452. 1949) has argued—by deducing from Léveillé's listing more than is actually permitted by the Code—that the latter author's mention constitutes a valid publication of *Podostrombium*. Doty (*in* Lloydia **11**: 133. 1948; **13**: 19. 1950), too, thinks that the name is not validly published by Léveillé and invokes Art. 41 (= Art. 38).

The next author to list the name—again as a perfect nomen nudum—is Lindley (Veg. Kingd. 44. 1846), who misspelled it: "*Podostromium*". Fries (Summa Veg. Scand. **2**: 484. 1849) mentioned the name once, "Ad entomogeneas formationes pertinent ... *Podostrombium* Kunz., ut vir antiqua fide in schedula addite ipse monet." (However, in the same work he accepted the fungus as representing a good genus: compare *Perona* "Fr.")

Finally one more mention may be discussed, to which attention was drawn by Rogers:

> "Anyone whose conscience still refuses the 1846 publication [by Léveillé] will cite *Podostrombium* Kunze ex Wittstein, Etym.-bot. Handwörterb. 711. 1856, where appears the statement "das Peridium ist Kreiselförmig und gestielt"—a meager, but legal, description."—Rogers (*in* Farlowia **4**: 27. 1950). [38]

I beg to disagree once more. It is quite evident that Wittstein did not treat the genus from a taxonomic point of view (cf. Art. 33; "incidental mention")! His aim was to give an "Etymologisch-botanisches Handwörterbuch", not a taxonomic enumeration of genera; the subtitle of his book runs, "Enthaltend die ... *Erklärung* der Namen sämmtlicher botanischer Gattungen, Untergattungen und ihre Synonyme." [39] He expressed his aim clearly in his preface:

> "[Ich] glaubte daher ... keine überflüssige Arbeit zu verrichten, wenn ich mir die Aufgabe stellte, alle für die Gattungen und Untergattungen eingeführte Namen etymologisch zu erklären, d.h. nicht bloss ihren Ursprung zu ermitteln, sondern auch die Beziehung ihrer wörtlichen Bedeutung zu den betreffenden Pflanzengruppe anzugeben." —Wittstein (*op. cit.* p. v).

It would become embarrassing for authors of etymological works if their explanations of names or epithets, coined by others with an eye on taxonomic characters of the groups involved, should be interpreted as an intentionally published taxonomic description! It is clear that Wittstein did not attempt to give his own opinion as a taxonomist in relation to the names explained, or to provide for omissions in the past. He merely took "Endlicher's genera plantarum" as a basis, according to his own statement!

A somewhat different case is the publication of the name *Phaeocoryne* Clem. ("Clavariaceae"), q.v. In a paper, exclusively concerned with etymological and grammatical subjects in relation to generic names of plants, Clements rejected certain names that were not acceptable to him for purely grammatical reasons and substituted them by new ones. In the case of *Phaeoclavulina* W. Brinkm., he coined *Phaeocoryne* to replace that name. He neither cited the author of the basinym, nor furnished a botanical description. (In his bibliography he did not cite any publication in which *Phaeoclavulina* is mentioned.) To all appearances it seems justified to claim that no valid reference whatsoever accompanies the new name even in the most concise form and to reject it, as a nomen nudum, as not validly published, although Clements added (in this special case) its etymological derivation: "*φαιός*, dusky, *κορύνη, ἡ*, club." This might be interpreted as a description accompanying the new name, but I prefer to assume that we are

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[37]) One will also find 1847 as the date.

[38]) Wittstein wrote: "*Podostrombium* Kunze (Sclerotiaceae). Zus. aus *πους* (Fuss) und *στρυμβιον* (Schneckengehäuse, Kegel, Kreisel); das Peridium ist kreiselförmig und gestielt."

[39]) Italics are mine.

acting in the spirit of the Code by not accepting etymological explanations as botanical descriptions. This case differs from that of *Podostrombium* in one respect. Clements changed a name, which might be taken as indicating that he accepted taxonomically the genus to which the basinym belongs. Even if he had added a botanical description as inadequate as "Club dusky", for instance, I would not have hesitated to consider his new name validly published. The Code speaks of descriptions, or references to descriptions, in connection with the valid publication of names and epithets, not of etymological explanations. — Variant spellings: "*Podostromium*"; Lindl., *l.c.* — "*Podostrumbium*"; Corner, Monogr. Clavaria (*in* Ann. Bot. Mem. **1**:) 196. 1950 (in synonymy). — For other generic names given to this fungus, see *Hypolyssus* "Berk.", *Heringia* Schw. (according to Rogers *in* Farlowia **4**: 27. 1950, perhaps based on the same collection as *Podostromium*), *Perona* "Fr.", and *Caripia* O.K.

Podostromium.—See *Podostrombium*.
Podostrumbium.—See *Podostrombium*.

Polyorus.—See *Polyozus*.
Polyozus P. Karst.—See "Clavariaceae".

Polypilus Pers. *in* Gaud. *in* Freyc., Voy., Bot. 176. 1826 (nomen provisorium). — In a note under *Thelephora aurantiaca* Pers. the author remarks that, "on pourra la séparer un jour des autres théléphores, pour en former un genre particulier (*polypilus*)." — Not *Polypilus* P. Karst. in Rev. mycol. **3** (No. 9): 17. 1881 ("Polyporaceae").

Porogramme Pat.—See "Polyporaceae".

Porostereum Pilát *in* Bull. Soc. mycol. France **52**: 330. 1936. — Etymology: πόρος, pore; the genus *Stereum*. Gender: n. — Type species (only original species): *Porostereum phellodendri* Pilát.—Part of the type collection (at Uppsala) has a perfectly smooth hymenophore and I would not be surprised if it is found to be *Stereum cinerascens* (Schw.) Mass. or a related species.

Prilleuxia Sacc. & P. Syd. *in* Sacc., Syll. Fung. **14**: 225. 1899. — Etymology: E. Prilleux. Gender: f. — Type species (same as of basinym): *Karstenia faginea* Britz.[40] Basinym: *Karstenia* Britz. (1897), q.v. — Remark. A name change, the basinym being preoccupied.

Prototremella Pat. *in* J. Bot. (ed. Morot), Paris **2**: 269. Aug. 16. 1888. — Etymology: πρῶτος, first; the genus *Tremella*. Gender: f. — Type species (only original species): *Prototremella tulasnei* Pat.—Now regarded as a synonym of *Tulasnella violea* (Quél.) Bourd. & G. (*Tulasnella lilacina* J. Schroet.): compare Rogers (*in* Ann. mycol. **31**: 184. 1933). — Typonyms: *Tulasnella* J. Schroet. (June 2, 1888) and *Pachysterigma* J-Olsen apud Bref. (end of 1888): see *Tulasnella*. Compare also *Muciporus* Juel.

Pseudothelephora "McGinty": Lloyd, Mycol. Writ. **6**: 890. 1919 (not validly published); see also: Stevenson & Cash *in* Bull. Lloyd Libr. No. 35: 47. 1936. — A nomen provisorium and like all other McGinty names not validly published: for some general remarks on these names, see Part I of the present series (Donk *in* Reinwardtia **1**: 205. 1951). — Coined in connection with *Thelephora gelatinoidea* Lloyd ("*Pseudothelephora gelatinosa*"). I have studied the type of this species in Lloyd's herbarium. It represents a typical species of *Thelephora* Fr. (with coloured angular-warty spores) except for the hymenophore which is more strongly granular-tubercular than is usual; the context is soft-fibrous and dry, and certainly not gelatinous as emphasized by Lloyd. Confusion of specimens is out of question.

Punctularia Pat. *apud* Pat. & Lagerh. *in* Bull. Herb. Boissier **3**: 57. 1895. — Etymology: punctum, point. Gender: f. — Type species (only original species): *Corticium tuberculosum* Pat.—According to Talbot (*in* Bothalia **6**: 25. 1951) the correct name of this species in *Punctularia affinis* (Berk. & C.) Talbot. This latter combination has as basinym *Reticularia affinis* Berk. & C., which is a name clearly based in its turn on the imperfect stage only (nomen anamorphosis), as is the simultaneously published *Reticularia venulosa* Berk. & C. Hence, an isonym of any of the two can not suppress one based on, or one inclusive of, the perfect stage like *Punctularia atropurpurascens* (Berk. & Br.) Petch.

Pycnodon Underw. *in* Bull. Torrey bot. Cl. **25**: 631. Dec. 16, 1898. — Etymology: πυκνός,

[40]) The epithet has been misspelt "*favinea*" (Clem. & Shear, Gen. Fungi 344. 1931).

crowded together; *ὀδών* tooth. Gender: m. — Type species (same as of basinym): *Kneiffia setigera* Fr. — Basinym: *Kneiffia* Fr. (1836), q.v. — Synisonyms: *Kneiffiella* Underw. (1897), *Knieffiella* P. Henn. (1898), (both preoccupied), and *Neokneiffia* Sacc. (Aug. 1898). — Remark. Underwood's second renaming of *Kneiffia* Fr.

Ramaricium John Erikss. *in* Svensk bot. Tidskr. **48**: 189. 1954. — Etymology: the genus *Ramar(ia)*; the genus (*Cort*)*icium*. Gender: n. — Type species (by original designation and only original species): *Ramaricium occultum* John Erikss.

Richnophora.—See *Ricnophora.*
Ricinophora.—See *Ricnophora.*

Ricnophora Pers., Mycol. europ. **2**: 7. 1825. — Etymology: *ῥικνός*, wrinkled; *φέρω*, I bear. Gender: f. — Type species (only original species): *Ricnophora carnea* Pers. = *Phlebia radiata* Fr. — Remark. See under *Corticium* Fr. (not *Corticium* Pers. or S. F. Gray). — Variant spellings: "*Richnophora*"; Fr., Syst. Orb. Veg. 363. 1825; Leman *in* Dict. Sci. nat. **45**: 447. 1827.—Rather errors. — "*Ricinophora*"; W. B. Cooke, Gen. Homobas. 86. 1953. — Typonym: *Phlebia* Fr. (1821).

[*Sarcopodium* Ehrenb. *ex* Brongn. *in* Dict. Sci. nat. **33**: 546. 1824. — Devalidated name: *Sarcopodium* Ehrenb., Sylv. mycol. berol. 12, 23. 1818. — Type species (only original species): *Sarcopodium circinatum* Ehrenb. — This genus was for some time included in *Thelephora* Ehrh. ex Fr. (Fries, Elench. **1**: 226. 1828) and *Corticium* Fr. (Fries, Epicr. 566. 1838). It belongs to the Deuteromycetes.]

Scopuloides (Mass.) Höhn. & L. *in* Wiesner-Festschr. 57, 58. 1908. — Etymology: scopula, broom; *εἶδος*, like. Gender: f. — Type species (same as selected for basinym): *Peniophora hydnoides* Cooke & Mass. *apud* Cooke *in* Grevillea **16**: 77. 1888. — Basinym: *Peniophora* subgen. *Scopuloides* Mass. *in* J. Linn. Soc., Lond. (Bot.) **25**: 154. 1890.—Introduced with two species. — Scope. When the generic name was published, Von Höhnel & Litschauer stated that they had not seen material; they did not mention any species. — Typification. The first of Massee's species was illustrated when the subgenus was published; it is here selected as the type. — Typonym. Compare *Grandiniella* P. Karst. (1895), q.v.

Scyphophilus.—See *Scyphopilus.*

Scyphopilus P. Karst. *in* Acta Soc. Fauna Fl. fenn. **2** (1): 40. 1881 (description reproduced *in* Rev. mycol. **4**: 130. 1882). — Etymology: *σκύφος*, cup; *πῖλος*, cap. Gender: m. — Type species (only original species): *Thelephora caryophyllaea* (Schaeff.) ex Fr. — Variant spelling: "*Scyphophilus*"; W. B. Cooke, Gen. Homobas. 89. 1953.—An error. — Typonym: *Phylacteria* (Pers.) Pat. (1887).

Scytinostroma Donk *in* Fungus **26**: 19. 1956. — Etymology: *σκύτινος*, made of leather; *στρῶμα*, blanket, stroma. Gender: m. — Type species (by original designation): *Corticium portentosum* Berk. & C. — Scope. Eight species were mentioned.

Skepperia Berk. *in* Trans. Linn. Soc., Lond. **22**: 130. 1857. — Etymology: E. Skepper. Gender: f. — Type species (only original species): *Skepperia convoluta* Berk. & C.—Compare Singer (*in* Lilloa **22**: 742. 1951).

Skepperiella Pilát *in* Bull. Soc. mycol. France **43**: 56. 1927. — Etymology: diminutive of *Skepperia*. Gender: f. — Type species (only original species): *Skepperia spathularia* (Berk. & C.) Pat.—Compare Singer (*in* Lilloa **22**: 740-741. 1951), who referred this genus to *Rimbachia* Pat.!

Soppitiella.—See *Soppittiella.*

Soppittiella Mass., Brit. Fung.-Fl. **1**: 106. 1892. — Etymology: H. T. Soppitt. Gender: f. — Type species (selected): "*Thelephora cristata*, Fr." sensu Mass.—This fungus as described and illustrated by Massee is presumably the same as *Corticium fastidiosum* (Pers. ex Fr.) P. Karst., although some allowance for errors in Massee's description should be made: for instance the spores are not "pale vinous". — Scope. The original species number five, the first being "*Thelephora sebacea*, Berk., Outl. p. xvii. t. 17, f. 6", and the fourth, "*Thelephora cristata* Fr." — Typification. The generic description states, for instance, that the fruit-body is "soft, fleshy, and subgelatinous when growing, collapsing when dry" and (in the general discussion) "soft and subgelatinous when moist". The spores are described as "colour-

ed". All of the included species are either incorrectly interpreted and/or incorrectly characterized! This makes the selection of the species most closely agreeing with the generic description a difficult task and it seems advisable to follow Rogers (*in* Mycologia **36**: 78. 1944; *in* Farlowia **3**: 492. 1949) who preferred "*Thelephora cristata*, Fr.": "In the absence of other motives for selecting a species as the type of the genus, it has been held desirable to choose that species which the author illustrated, as presumably the one best representing his intended concept." This choice was adopted by Donk (*in* Reinwardtia **1**: 486. 1952). — Remarks. Rogers, in addition, considered the generic name, by this choice, as based on the original fungus (a species of *Sebacina* Tul.) of the specific name applied to the type species of *Soppittiella* by Massee, rather than on the fungus that Massee had before him when founding the genus. This, of course, is unacceptable: compare Donk (*op. cit.* pp. 483-486). — This generic name was listed by Ainsworth & Bisby (Dict. Fung. 277. 1943) as a nomen confusum, perhaps so by error; compare Rogers (*in* Farlowia **3**: 492. 1949). — Variant spelling: "*Soppitiella*"; W. B. Cooke, Gen. Homobas. 90. 1953—An error. Typonym: *Cristella* Pat. (1887).

Sparasis.—See *Sparassis*.

Sparassis Fr. ex Fr.—See "Clavariaceae".

Steerbeckia.—See *Sterbeeckia*.

Stellatostroma Mass.—See *Asterostroma*.

Stelligera Heim ex Doty.—See "Clavariaceae".

Sterbeeckia Dumort., Comm. bot. 33. 1822. — Etymology: F. van Sterbeeck. Gender: f. — Type species (selected): *Peziza cornucopioides* L. = *Craterellus cornucopioides* (L. ex Fr.) Pers. — Scope. Introduced with two species. First species, *Peziza cornucopioides* L. and *Helvella hydrolips* Bull. ("*hydrilops*") [= *Cantharellus cinereus* (Pers.) ex Fr.]. — Typification. As proposed by Doty (*in* Lloydia **11**: 135. 1948). — Variant spelling: "*Steerbeckia*"; Dumort., Anal. Fam. 73. 1829. — Homonyms: *Sterrebekia* Link (1816; Gastromycetes), with variant spellings, "*Steerbeckia*": Brongn. (1824) and "*Sterrebeckia*": Fr. (1849).—Undoubtedly to be considered a homonym, although the two original spellings are not exactly the same. Starting-point date for Gastromycetes: 1801. — Typonyms: *Craterellus* Pers. (1825) and *Trombetta* Adans. ex O.K. (1891). — Status. Impriorable on account of the earlier homonym.

Stercum.—See *Stereum* Pers. ex S. F. Gray.

Sterellum P. Karst. *in* Bidr. Känn. Finl. Nat. Folk **48**: 405. 1889 (German translation of Swedish description *in* Bot. Cbl. **43**: 384. 1890). — Etymology: diminutive of *Stereum*. Gender: n. — Type species (only original species): *Stereum pini* (Schleich.) ex Fr.

Stereofomes J. Rick *in* Egatea **13**: 435 1928. — Etymology: the genus *Stereum*, the genus *Fomes*. Gender: m. — Type species (selected): *Stereofomes nodulosus* J. Rick. — Scope. Introduced with two species: *Stereofomes nodulosus* J. Rick (with description) and *S. resupinatus* J. Rick (without description). — Typification. W. B. Cooke (Gen. Homobas. 91. 1953), who gave "Egatea **16**: 395. 1931" as the place of publication, listed *Stereofomes resupinatus* as the type species. He thus missed the first species by an oversight. From the above note on descriptions accompanying the specific names of the original species, one would rather conclude that the other original species would be the better choice. — Remarks. Published again as "*Stereofomes* Rick nov. genus" *in* Egatea **15**: 395. 1930, this time with five species, *S. resupinatus* coming first, and *S. nodulosus* as the third; compare also J. Rick (*in* Brotéria, Sér. Ci. nat. **3**: 170. 1934; **9**: 145. 1940 [41]). — W. B. Cooke (*l.c.*) also listed a genus *Stereofomes* S. Ito & S. Imai *in* Trans. Sapporo nat. Hist. Soc. **16**: 128. 1940. This appears to be an error for at the cited place of publication only a new species is described (*Stereofomes palmicola* S. Ito & S. Imai) and there is no reason to suppose that the Japanese authors were not acquainted with *Stereofomes* J. Rick: if a new genus had been published there, it would have been with a formal generic description as in the case of *Boninohydnum* S. Ito & S. Imai preceding the publication of *S. palmicola*.

Stereogloeocystidium (J. Rick) J. Rick *in* Brotéria, Sér. Ci. nat. **9**: 79. 1940. — Etymology: the genus *Stereum*; the genus *Gloeo-*

[41]) On page 43 of volume 9 as a subgenus of *Stereum*.

cystidium. Gender: n. — TYPE SPECIES (selected): *Stereogloeocystidium lobato-plicatum* J. Rick. — BASINYM: *Stereum* subgen. *Stereogloeocystidium* J. Rick *in* Brotéria, Sér. Ci. nat. **9**: 43. 1940 ("*Stereoglococystidium*"). —Description. No species mentioned. — VALID PUBLICATION. The paper on *Stereum* in Brazil in which this taxon was distinguished was published in instalments. In the introduction (p. 43) the name under discussion was published as "*Stereoglococystidium* Rick nov. subgenus" (Latin description), but in a later instalment no mention is made of this status and *Stereogloeocystidium* was treated as a genus (Latin description; no reference to p. 43). — SCOPE. Introduced with 13 species. First species: *Stereogloeocystidium lobato-plicatum*. Eight of the species were described as new, and the rest may be incorrectly identified. — TYPIFICATION. Although it would have been wiser to refrain from selecting a type species until more information was available regarding Rick's species, W. B. Cooke (Gen. Homobas. 91. 1953) indicated the first species as the type (as *S. "lobatum-plicatum"*).

Stereophyllum P. Karst. *in* Hedwigia **28**: 190. 1889. — ETYMOLOGY: the genus *Stereum*; *φύλλον*, leaf. Gender: m. — TYPE SPECIES (only original species): *Stereophyllum pallens* P. Karst. — VARIANT SPELLING. Ulbrich [*in* Lindau, KryptFl. Anfäng. **1** (3 Aufl.): 129. 1928] listed *Stereophyllum boreale* P. Karst. as "*Stereophytum boreale* Karst." [as a synonym of "*Phaeocyphella muscigena* (Pers.) Pat."]. — HOMONYMS: *Stereophyllum* Mitt. (1859; Plagiotheciaceae, Musci). — *Stereophyllum* F. Heydrich (1904; Rhodophyta). — STATUS. Impriorable on account of the earlier homonym.

Stereophytum.—See *Stereophyllum*.

Stercum.—See *Stereum*.

Stereum Pers. *ex* S. F. Gray, Nat. Arrangm. Brit. Pl. **1**: 652. 1821. — ETYMOLOGY: *στερεός*, firm. Gender: n.

TYPE SPECIES (selected): *Thelephora hirsuta* Willd.

PROTONYM: *Stereum* Hill, Gen. nat. Hist. **2**: 34. 1751.—A pre-Linnean name, introduced for a genus of Fungi, Class the first: "Such as grow in horizontal direction on trees"; characterized as "of a solid and uniform structure, neither divided into lamellae [= pore layers], nor pierced with holes, either externally or internally, but whole upper and under surface are the same, and both apparently smooth and uniform." Hill described three species and mentioned 14 other ones. Various kinds of fungi and lichens were included. The first is a composite one; it includes true species of *Stereum* as now understood, such as *S. hirsutum* (Willd. ex Fr.) S. F. Gray and *S. purpureum* (Pers. ex Fr.) Fr. It is likely that Persoon took up Hill's generic name.

DEVALIDATED NAME: *Stereum* Pers. *in* Neues Mag. Bot. **1**: 110. 1794 (= Tent. 30. 1797). — Introduced with "*Thaelaephora hirsuta; mesenteriformis* Willd. *Th. striata; variegata* Schrader" mentioned as examples and followed by three new species of which the first is *Stereum purpureum* Pers. [42] — Later on reduced by Persoon (Syn. Fung. 566) to the rank of a subdivision of *Thelephora*. — Of considerable historical importance is Link's emendation of *Stereum* (*in* Mag. Ges. naturf. Fr. Berlin **3**: 39. 1809). He did not mention an author, but he did certainly not establish a new genus; he emphasized some microscopical features and made the presence of setae and conspicuous cystidia the leading feature, shifting the attention especially to what now would be called the *Hymenochaete*, and to a lesser degree the *Lloydella*, element of Persoon's original species: "Pileus ... subtus thecis seggregatis basi immersis, apicibus emersis. Heterocl. ... undique fere thecis emersis obsitus ... *St. ferruginei* exhibit fig. 62. Hujus loci *Thelephora ferruginea rubiginosa* et *abietina* Pers. Species heteroclita: *St. damicorne* ... Brasilia ...." [43]

SCOPE. The first to validly re-publish *Stereum* Pers. after the starting-point date was Gray who kept closely to the original delimitation. His species are, in this order: (1) *Stereum laciniatum* Pers. = *Thelephora laciniata* (Pers.) Pers., (2) *Thelephora rubiginosa* (Dicks.) Pers., (3) *Thelephora ferruginea*

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[42]) This seems the sole reason why W. B. Cooke (Gen. Homobas. 92. 1953) lists *S. purpureum* as the type of *Stereum* Pers. 1794. In this case he did miss the true first species. He also gives a "*Stereum* Pers. Obs. Myc. **1**: 35. 1796" with *Stereum laciniatum* Pers. as the type.

[43]) And compare Link [*in* Neues J. Bot. **3** (1, 2): 15. 1809]: "Exemplum e *Thelephora ferruginea* Pers. habes [pl. 1] f. 23. Hujus loci sunt *Thelephora pallida, ferruginea, rubiginosa, abietina, crispa,* quantum mihi compertum est."

Pers. (*Auricularia tabacina* Sow.), (4) *Stereum hirsutum* (Willd.) Pers., and (5) *Thelephora mesenterica* (Dicks.) Pers.

MONADELPHOUS HOMONYMS. Independently of Gray, *Stereum* was taken up by Fries (Syst. Orb. Veg. 84. 1825); he cited Link as the author and also adopted the latter's emendation. As Donk (*in* Bull. bot. Gdns Buitenzorg III **17**: 171-172. 1941) pointed out, Fries used the name *Stereum* in 1825 (and as that of a subtribe of *Thelephora* in his Elenchus **1**: 172. 1828) for exactly the same genus which now bears the name *Hymenochaete* Lév.

From 1835 (Fries, Fl. scan. 340. 1835; Gen. Hym. 14. 1836; Epicr. 345. 1838; etc.) onwards he altered his delimitation of *Stereum* considerably and included in it, besides the *Hymenochaete* element, also the *Lloydella* element and species without notably projecting setae or cystidia, thus returning almost to Persoon's original delimitation! Surprisingly enough he refused to call it *Stereum* Pers. In 1835 (*l.c.*) he did not mention any species; in 1836 (*l.c.*) he stated:

> "...; nostrae plurimae effuso-reflexae; v.c. *Th. hirsuta, rubiginosa.* ... Nec cum *Stereis* Pers. nec *Stereis* Lk. confundendum genus, sed cum species utriusque citati generis huc ex maxima parte pertineant, nomen hoc loco servavi."

Finally, Fries (Hym. europ. 638. 1874; sub "*Stereum.* (Pers.)[44] Ed. I [= Epicr.], p. 345.") remarked:

> "Species hymenio ferrugineo-setoso olim a Linkio (*Stereum*), nuperius a Léveillé (*Hymenochaete*) genere moventur, sed per gradus medios vix sensibiles transeunt harum setae in frequentes pallidas et exinde longe removentur species maximus affines."

It thus becomes clear that *Stereum* of Fries of 1835 (when he abandoned the denomination *Auricularia*, q.v.!, for the *Stereum hirsutum* group, to replace it by *Stereum* and at the same time including *Stereum* sensu Link, Fr. 1825) had as its leading species *Stereum hirsutum* rather than a species of *Hymenochaete!*

Summarizing we find that there are two genera called *Stereum* by Fries: (i) *Stereum* Pers. em. Link ex Fr. 1825, with a species of *Hymenochaete* as the type, and (ii) *Stereum* [Pers. ex] Fr. 1835, with *Stereum hirsutum* as the type species. As both genera have their type species among Persoon's original ones, we can consider them both as mere monadelphous homonyms of *Stereum* Pers. ex S. F. Gray.

TYPIFICATION. If we wish to retain both the generic names *Stereum* and *Hymenochaete* Lév. as now universally applied, it becomes almost imperative to select *Stereum hirsutum* as the type species of *Stereum* Pers. ex S. F. Gray. Such a selection has nothing artificial about it and is sanctioned by Fries's later work which forms the basis of every modern treatment of the genus. It was suggested by Clements & Shear (Gen. Fungi 345. 1931) for the devalidated name and was selected by Donk (*op. cit.* p. 179; **18**: 99. 1949) for *Stereum* Pers. ex S. F. Gray; Rogers (*in* Farlowia **4**: 27. 1950), Talbot (*in* Bothalia **6**: 304, 343. 1954), and Lentz [Ster. all. Gen. U. Miss. Vall. (= Agr. Monogr., U.S. Dept. Agr. No. 24:) 25. 1955] accepted this choice. — W. B. Cooke (Gen. Homobas. 92. 1953) listed *Stereum* Pers. ex S. F. Gray twice, once with *S. hirsutum* as the type species and once with *S. laciniatum* Pers., apparently to make good the omission that Gray's first species had been deliberately passed over by other authors. Compare also foot-note 42.

REMARK. Donk (*l.c.*, 1941) proposed to conserve *Stereum* Pers. ex Fr. 1835, with *S. hirsutum* as the type species, in favour of *Auricularia* Bull. ex Fr. 1825, with the same type species, and *Stereum* Fr. 1825 (= *Hymenochaete*). At the same time it was moved to conserve *Hymenochaete* Lév. 1846, with *Stereum rubiginosum* (Dicks.) ex Fr. as the type species, against *Stereum* Fr. 1825.[45] After it was demonstrated that Gray's work dates from after the starting point date, a fact not known to the proposer, such conservations became entirely superfluous and, consequently, the relative proposals were withdrawn (Donk, *op. cit.* **18**: 98, 110. 1949).

VARIANT SPELLING: "*Stercum*"; Pers., Obs. mycol. **2**: 90-92. 1799.—Consistently used in combinations.

Telephora.—See *Thelephora.*

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[44]) Note the return of Persoon as the author!

[45]) The conservation of *Hymenochaete* in favour of *Hymenochaeta* P. Beauv. 1819, seems still to be necessary.

Terana Adans. *ex* O.K., Rev. Gen. Pl. **2**: 871. 1891. — Etymology: —. Gender: f. — Type species (selected in 1891): *Agaricum Lichenis facie, caeruleum* Mich., Nov. Pl. Gen. 124 *pl. 66 f. 6.* 1729.—This species "ist *Corticium caeruleum* Fries . . ., durch die bei Pilze seltene blaue Farbe in Uebereinstimmung mit dem eigenthümlichen Habitus leicht zu recognosciren."—O. Kuntze (*l.c.*). — Devalidated name: *Terana* Adans., Fam. Pl. **2**: 5. 1763.—A non-Linnean name that nevertheless would have been accepted as validly published if the starting-point date for these fungi had not been changed from 1753 to 1821. Two illustrated species of *Agaricum* Mich. were included, viz. (i) the one indicated as the type above, and (ii) *Agaricum Lichenis facie, sordide rufum, rugosum,* & *verrucosum, odoratum* Mich., *l.c. pl. 66 f. 7.* — Valid publication. *Terana* was taken up by O. Kuntze as a substitute for "*Corticium* Fries 1838 . . . Sacc. syll. VI 604-640 . . ."; he regarded it as the oldest acceptable name in accordance with the rules of nomenclature followed by him. He validly re-published the name by the reference to Adanson's description and by the reproduction of that author's description. The latter, as produced by Kuntze, runs:

> "Lame rampante irregulière lisse, appliquée par toute la surface inférieure; substance spongieuse. Graines (en poussière) sphériques repandues à la surface supérieure. Die citirten Tafeln zeigen ohne Details bloss auf altem Holz dicht aufgewachsene Pilze, wie sie Adanson beschreibt."—O. Kuntze (*l.c.*).

Typification. *Terana* was technically validly re-published in its original sense, that is, based on the species attributed to it by Adanson. Kuntze considered the first species as the type; see above. He more or less excluded the second one from consideration when he transferred all of Saccardo's species from *Corticium* to *Terana:*

> "Die wohlriechende 2. Art ist . . . nicht sicher zu ermitteln . . .. Es genügt aber die 1. Art zur Recognition und Wiederherstellung der Gattung *Terana;* die zweite Art könnte sogar ausgeschlossen werden."

Homonym: *Terana* La Llave (1885; Compositae). — Status. Impriorable on account of the homonym.

Thaelaephora.—See *Thelephora.*

Thanatephorus Donk *in* Reinwardtia **3**: 376. 1956. — Etymology: θανατηφόρος, death-bringing. Gender: m. — Type species (by original designation and only species mentioned): *Hypochnus solani* Prill. & Delacr. = *Thanatephorus cucumeris* (Frank) Donk.

Thelaephora.—See *Thelephora.*

Thelephora Ehrh. *ex* Fr., Syst. mycol. **1**: lvi, 428. 1821. — Etymology: θηλή, a nipple; φέρω, I bear. Gender: f. — Type species (selected): *Thelephora terrestris* Ehrh. ex Fr. — Devalidated name: *Thelephora* Ehrhart, Pl. crypt. exsicc. Dec. 18: no. 179. *ca.* 1790 [46]); Beitr. Naturk. **7**: 100. 1792 (nomen); Willd., Fl. berol. Prod. 396. 1787 (as *Thaelaephora*); Roth, Fl. germ. **1**: 538. 1788 (as *Thaelaephora*); J. F. Gmel., C. Linné Syst. nat. **2** (2): 1440. 1791 (as *Thaelaephora*). — "Nomen . . . composuit Ehrhart; characterem stabilivit Willdenow; indolem illustrarunt Link & Nees."—Fries (Syst. mycol. **1**: 428). — The three authors just cited after Ehrhart did not indicate Ehrhart as the author of the name, which in older times was often attributed to either Willdenow or Roth. Willdenow had three species of which one was figured: *Th. mesenteriformis* Willd. = *Th. terrestris* Ehrh. The next to take up the name

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[46]) I have been unable to consult this and a few other numbers of this series of exsiccatae. Number 179 is not available at Uppsala, Kew, and the British Museum (Nat. Hist.). It is often cited as No. 178 (Persoon, Syn. Fung. 566. 1801), but in Ehrhart's own "Beitrage" it is cited as given above. From the latter publication it appears that a previously published number (Decas 17, No. 169) already bears the generic name *Thelephora* ("*Thelephora pallida* Ehrh."). A later number (Decas 24, No. 238) is mentioned as "*Thelephora fragilis* Ehrh." I suppose that *Thelephora* Ehrh., as a generic name, was originally published as a nomen nudum, and the author did not furnish a generic description either in his "Beiträge". This would make Willdenow the first author to supply one: Fries did not add a bibliographic reference to Ehrhart's work and apparently took the genus and the name from Willdenow's book of 1787. For a paper on Ehrhart's exsiccatae, see Britton (*in* J. Bot., Lond. **60**: 318-327. 1922).

was Persoon (Syn. Fung. 565. 1801) who dropped *Stereum* Pers. for it. — Scope. Fries used it for an extensive group of which *Th. terrestris* was part. — Typification. Soon after the re-publication of the name, Fries himself (Syst. Orb. Veg. 81. 1825), temporarily, restricted the genus to exactly the same group of species to which the name is usually applied to-day [47]): "Hymenium subpapillosum, inaequalibe. Sporidia quaterna, fusco-purpurea!" *Thelephora terrestris* was explicitely indicated as the type species! It has been currently accepted as such: compare Donk (Rev. niederl. Homob.-Aphyll. **2**: 40. 1933) and Imazeki (*in* Mycologia **45**: 559-560. 1953). — W. B. Cooke (Gen. Homobas. 94. 1953) listed the re-published name once as *Thelephora* Fr., with *Th. terrestris* as the type species ("fide Doty" = Doty *in* Lloydia **11**: 135. 1948) and once as *Thelephora* Ehrh. ex Fr., with *Th. elegans* Fr. as type ("fide Rogers's notes"). The latter indication seems to mean that up till then Fries's first species was missed by other authors, who had every reason of bypassing it. It was, for instance, previously excluded, see under *Podoscypha* Pat. — Variant spellings: "*Thaelaephora*": Willd. *l.c.*; Roth, *l.c.*; etc. — "*Thelaephora* Willd."; Usteri, Juss. Gen. Pl. 6. 1791; etc. — "*Telephora*": C. Nees, Syst. Pilze 246. 1817; Bonord., Handb. Mykol. 161. 1851; Mathieu, Fl. gén. belg. **2**: 313. 1854; etc. — "*Théléphora*"; Dumort., Comm. bot. 82. 1822. — "*Thelephorus* [Willd. Pers.]"; Poir. *in* Lam., Tabl. encycl., Bot., Ill. Genres **3**: 492, 523. 1823 (in synonymy). — "*Thelophora*"; Clem. *in* Univ. Stud. Nebraska **3** (1): 55. 1902.—A correction.

Thelephorus.—See *Thelephora.*
Thelophora.—See *Thelephora.*

Thelephorella P. Karst. *in* Hedwigia **28**: 191. 1889. — Etymology: diminutive of *Thelephora.* Gender: f. — Type species (only original species): *Thelephorella brasiliensis* P. Karst. — Remark. W. B. Cooke (Gen. Homobas. 94. 1953) listed the generic name twice, once as: "*Thelephoriella* [!] Karst. Hedw. **28**: 191. 1889. ... Type: *Cladoderris* Pers. in Gaud., fide Killermann 1928, fide Doty." This cryptic notation means that Killermann (*in* Engl. & Pr., Nat. PflFam., 2. Aufl., **6**: 148. 1928) cited "*Thelephorella* Karst. ...?" as a doubtful synonym under *Cladoderris.* — Variant spelling: "*Thelephoriella*"; W. B. Cooke, Gen. Homobas. 94. 1953.—See quotation above. An error.

Thwaitesiella Mass. *in* Grevillea **21**: 2. 1892. — Etymology: G. H. K. Thwaites. Gender: f. — Type species (only original species): *Radulum mirabile* Berk. & Br.—For this species, see under *Lopharia.* — Variant spelling: "*Thwaitsiella*"; W. B. Cooke, Gen. Homobas. 94. 1953.—An error. — Typonyms: *Lopharia* Kalchbr. & McOwan (1882) and *Licentia* Pilát (1940); and compare *Lloydella* Bres. (1901).

Tinctoporia Murrill.—See "Polyporaceae".

Tomentella Pat., Hym. Europe 154. 1887. — Etymology: tomentum, felt. Gender: f. — Type species (selected): "*Tomentella ferruginea*".—This name represents a recombination of the specific epithet of *Corticium ferrugineum* Pers. (Obs. mycol. **2**: 18. 1799). I studied Persoon's type specimen in the Rijksherbarium at Leyden long ago and determined it as *Tomentella coriacea* Peck (Donk, Rev. niederl. Homob.-Aphyll. **2**: 34. 1933); this may be incorrect, but the species is not what is now indicated by that name. The species in Patouillard's sense, which is the most common interpretation of *Corticium ferrugineum* Pers., has been called *Tomentella subferruginea* (Burt em.) Donk and more recently *T. pallidofulva* (Peck) Litsch. — Protonym. Patouillard captioned his genus "*Tomentella* (Pers.)", and thus apparently referred to Persoon, Obs. mycol. **2**: 18-19. 1799. Here one will find the word *Tomentella,* used in parentheses, between the generic name and the specific epithet of *Corticium ferrugineum* and *C. chalibeum* Pers.; it was not further mentioned in an explanatory note, neither was a description added, or anything of this kind. It appears in no other publication by Persoon, except once: in his "Synopsis" (p. 579. 1801) he cited the synonym "Obs. myc. 2. p. 2. *Tomentella chalibaea*" under *Thelephora chalibaea* (Pers.) Pers. Elsewhere in his "Observationes" Persoon mentioned infrageneric taxa in this manner. There is not much reason to cite Patouillard's generic name in combination with "Pers." — Scope: "*T. ferruginea, T. caesia, T. Menieri,*

[47]) Misapplications of *Thelephora:* Wallroth, Fl. crypt. Germ. **2**: 561. 1833, who excluded the typical part emphasized by Fries (cf. under *Hyphoderma* Wallr.), and Patouillard, Hym. Eur. 150. 1887; Ess. taxon. Hymen. 42. 1900; Bourd. & G., Hym. France 80. 1928.

etc."—Patouillard (*l.c.*). From other publications of this author it becomes clear that he refers to: (i) *Corticium ferrugineum* Pers.: Pat., Tab. anal. **1**: no. 26. 1883, already discussed above; (ii) *Thelephora caesia* Pers.: Pat., Tab. anal. **2**: no. 682. 1889; and (iii) *Thelephora menieri* Pat., Tab. anal. **2**: no. 580. 1886, perhaps a synonym of *Corticium sulphureum* Pers. (non Fr.?) [= *Hypochnus fumosus* (Fr. ex Pers.) Fr. sensu Burt] according to Rogers & Jackson (*in* Farlowia **1**: 308. 1943). — TYPIFICATION. Patouillard's first species, which he identified (incorrectly) with one of the two species connected with Persoon's first use of the word *Tomentella*, is considered the type. "*Tomentella ferruginea* (Pers.) Pat." was already suggested as the type species for *Tomentella* Pat. by the Nomenclature Committee of the British Mycological Society (*in* Trans. Brit. mycol. Soc. **23**: 225-226. 1939). Patouillard's fungus is very common in Europe and well known. — REMARKS. Maire (*apud* Int. Rules bot. Nomencl., 3. Ausg., 123. 1935) proposed *Tomentella* Pat. as a nomen conservandum against *Hypochnus* Fr. emend. P. Karst. This seems unnecessary and the proposal was rejected by the Special Committee for Fungi (*in* Taxon **2**: 29. 1953; *in* Mycologia **45**: 314. 1953); see under *Hypochnus*. — The first authors (as far as I am aware) who listed "*Tomentella* Pers." as a generic (?) name were Fries [Syst. mycol. **3** (Ind.): 190. 1832] and Endlicher (Gen. Pl. 38. 1836), but they listed it only as a synonym of *Thelephora* Ehrh. — HOMONYMS: *Tomentella* P. Karst. (1889; "Thelephoraceae"), q.v., and *Tomentella* J.-Olsen apud Brefeld (1888; "Thelephoraceae"), q.v. — NOMEN CONSERVANDUM. It is likely that *Caldesiella* Sacc. (1877) will be fused with *Tomentella*; in fact some mycologists have done so already in manuscript. This would imply the use of the former name for the combined genus as was pointed out by Rogers (*in* Mycologia **31**: 305. 1939), who at the same time proposed *Tomentella* (embracing numerous species) as a nomen conservandum against *Caldesiella* (with at most two or three species). The Nomenclature Committee of the British Mycological Society (*op. cit.* p. 232) and Donk (*in* Bull. bot. Gdns Buitenzorg III **17**: 179. 1941) supported this proposal, which was adopted by the Special Committee for Fungi (*in* Code 78. 1952; *in* Mycologia **45**: 316. 1953).

Tomentella J.-Olsen *apud* Brefeld, Unters. Gesamtgeb. Mykol. **8**: 9. "1889" [1888]. — ETYMOLOGY: tomentum, felt. Gender: f. — TYPE SPECIES (selected): *Tomentella flava* Bref. = *Corticium isabellinum* (Fr. ex Fr.) Fr. = *Tomentella isabellina* (Fr. ex Fr.) Höhn. & L. = *Botryobasidium isabellinum* (Fr. ex Fr.) D. P. Rog. — PROTONYM. See below. — SCOPE. Introduced with two species, *Tomentella flava* (first species) and *T. granulata* Bref. — TYPIFICATION. The first species is here selected as the type. — REMARKS. Technically and factually this was a new genus and it was so announced when published: "... die neu unterschiedenen Gattungen *Pachysterigma* und *Tomentella* ..." (Brefeld, *op. cit.* p. 3); "... einer besonders unterschiedenen Gattung, für welche Olsen den alten Namen *Tomentella* von Persoon (1799) gewählt hat" (p. 5); "Zu den Formen der Gattung *Hypochnus* wurde auch die jetzt abgetrennte Gattung *Tomentella* gerechnet, deren Namen ursprünglich Persoon 1799 gemacht hat" (p. 9). No mention was made of any other use of Persoon's name (or, rather, subgeneric epithet), for which see under *Tomentella* Pat. Since none of Persoon's species is an original species of the new genus under discussion, the name of the latter genus should be cited as "*Tomentella* O. Johan-Olsen apud Brefeld (non Persoon)". It was a remarkable coincidence that this obscure Persoonian name was taken up in three successive years by different authors for different taxa. It may be assumed that Olsen and Brefeld did not know of Patouillard's publication of it in 1887. (Karsten knew of that publication, but preferred to have his own genus *Tomentella.)* — TYPONYM: *Botryohypochnus* Donk (1931), q.v. — HOMONYMS: *Tomentella* Pat. (1887; "Thelephoraceae"), q.v. and *Tomentella* P. Karst. (1889; "Thelephoraceae"), q.v. — STATUS. Impriorable on account of the earlier homonym.

Tomentella P. Karst. *in* Bidr. Känn. Finl. Nat. Folk **48**: 419. 1889. — ETYMOLOGY: tomentum, felt. Gender: f. — TYPE SPECIES (selected): *Corticium sulphureum* Pers. (an Fr.?).—Judging from the specific description one might not be entirely convinced that Karsten's specimens were correctly named (for a modern description of Persoon's species see Bourdot & Galzin, Hym. France 234); he does not mention the asperulation of the spores (which may have been difficult to observe, considering the microscopical outfit employed). However, in his "Hattsvampar" (Karsten *in* Bidr. Finl. Nat. Folk **37**: 241. 1882), the description of this species con-

tains elements which seem to point to a correct determination. *Corticium sulphureum* is often known as *Hypochnus fumosus* (Fr. ex Pers.) Fr. sensu Burt. It is now also considered synonymous with *Phlebia vaga* Fr., and this applies to Karsten's interpretation of the latter Friesian species, too. — PROTONYM. Karsten called the genus "*Tomentella* (Pers. Obs. **2**. pr. p.) Karst."; see further under *Tomentella* Pat. The two species with which Persoon associated the name *Tomentella* are not represented in Karsten's genus. — SCOPE. Included species were, in the given order: (i) *Corticium sulphureum* Pers. (see remarks above), (ii) *Tomentella sulphurina* P. Karst. = *Peniophora sulphurina* (P. Karst.) Höhn. & L., (iii) *Lyomyces byssinus* P. Karst. = *Corticium byssinum* (P. Karst.) Mass. (cf. also Rogers & Jackson *in* Farlowia **1**: 304. 1943), and (vi) *Tomentella obducens* P. Karst. = *Peniophora byssoides* (Pers. ex Fr.) Bres. — TYPIFICATION. I select here Karsten's first species. Various considerations might lead to a different choice. It seems that Karsten was not aware of the fact that his genus *Phlebiella* was based on what is supposed to be the same species (under a different name). — HOMONYMS: *Tomentella* Pat. (1887; "Thelephoraceae") q.v. and *Tomentella* J.-Olsen apud Brefeld (1888; "Thelephoraceae"), q.v. — There is no indication that *Tomentella* P. Karst. has anything to do with Patouillard's or Brefeld's genus; the three names were apparently independently published (although Karsten had Patouillard's book in hand). They are not interpreted here as monadelphous homonyms because Persoon's name has no, and never had any, nomenclatural standing; it is not a devalidated name. — TYPONYM. Compare *Phlebiella* P. Karst. (1890). — STATUS. Impriorable on account of the earlier homonyms.

Tomentellina Höhn. & L. *in* S.B. Akad. Wiss. Wien, Mat.-nat. Kl., Abt. I, **115**: 1604. 1906. — ETYMOLOGY: a diminutive of *Tomentella*. Gender: f. — TYPE SPECIES (only original species): *Tomentellina ferruginosa* Höhn. & L. = *Kneiffiella bombycina* P. Karst.—Erroneously listed by W. B. Cooke (Gen. Homobas. 94. 1953) as *T. "ferruginea"*. — TYPONYM: *Kneiffiella* P. Karst. (1889).

Trechispora P. Karst.—See "Polyporaceae".

Trichocarpum.—See *Trichocarpus*.

[*Trichostroma* Corda *in* Sturm, Deutschl. Fl., Pilze **2**: 131. 1829. — Type species (only original species): *Trichostroma purpurascens* Corda. — This is currently regarded as an imperfect fungus, but W. B. Cooke (Gen. Homobas. 96. 1953), for reasons not stated, listed it as a genus of Thelephoraceae.]

Trichocarpus P. Karst. *in* Bidr. Känn. Finl. Nat. Folk **48**: 407. 1889 (German translation of Swedish description *in* Bot. Cbl. **43**: 384. 1890). — ETYMOLOGY: θρίξ, τριχός, hair; καρπός, fruit. Gender: m. — TYPE SPECIES (only original species): *Xerocarpus ambiguus* P. Karst.—The type specimen has been studied by Bresadola (*in* Atti Accad. Agiati III **3**: 107. 1897) who declared it synonymous with *Stereum chailletii* (Pers. ex Fr.) Fr. — VARIANT SPELLING: "*Trichocarpum*": W. B. Cooke (Gen. Homobas. 95. 1953; incidental mention).—Presumably an error. — HOMONYMS: *Trichocarpus* Schreb. (1779; Tiliaceae) and *Trichocarpus* Necker[48] (1790; Rosaceae).—STATUS. Impriorable on account of the earlier homonyms.

[*Triclinum* Fée, Essai Crypt. Ecorc. exot. off. 147 *pl. 33 f. 4* (not *pl. 34 f. 1* as cited in the text). 1824; Fries, Syst. mycol. **3** (2): 288. 1832. — Type species (only original species): *Triclinum cinchonarum* Fée. — This generic name has been cited as a synonym of "*Hypochnus* Fries" (cf. Pfeiffer, Nomencl. bot. **2**: 1470. 1874). Zahlbruckner (Cat. Lich. univ. **3**: 268. 1925) listed the type species as *Psoroma cinchonarum* (Fée) Müll.-Arg., thus as a lichen.]

Trombetta Adans. *ex* O.K., Rev. Gen. Pl. **2**: 873. 1891. — ETYMOLOGY: trombetta di morto (maggiore a cespi), an Italian name for the type species (Micheli, Nov. Pl. Gen. 201. 1729). Gender: f. — TYPE SPECIES (selected): *Fungoidaster cespitosus, superne fuscus, inferne cinereus* Mich. *pl. 82 f. 5* = *Craterellus cornucopioides* (L. ex Fr.) Pers. — DEVALIDATED NAME: *Trombetta* Adans., Fam. Pl. **2**: 6. 1763.—Introduced for part of *Fungoidaster* Mich., namely for the species cited as "Mich. t. 82. f. 5 à 8". — Although Adanson did not accept the Linnean binomial method, his names would have been

[48]) In my opinion Necker's names for his 'species naturales' (which are placed under 'genera') are not validly published as generic names, and, should not be taken as part of the binomial system of the Code.

considered validly published if the starting-point date 1753 for these fungi had not been changed. — Scope & valid publication.

> "*Trombetta* Adans. ... c. syn. *Fungoidaster* Mich. t. 82 fig. 5-8 .... Micheli hatte 2 Sectionen unter *Fungoidaster* 1. § semine in superna parte donati, welche ... jetzt für *Leotia* Hill zu gelten hat; 2. Semine [in] inferna parte donati, welche namentlich unter fig. 5 gut abgebildet ist und von Adanson nach dem von Micheli citierten italienischen Volksnamen Trombetta di morto einfach *Trombetta* genannt wurde. ..."—O. Kuntze (*l.c.*).

It may be concluded that Kuntze accompanied the re-introduction of the generic name *Trombetta* Adans. by a generic description: the one he reproduced from Micheli of that author's second section, "semine in inferna parte donati". Accepting this point the original species become automatically those of Micheli's second group, *Fungoidaster* species 5-10, the first of which is represented by plate 82, figure 5. As applied by Kuntze the name was used as a substitute for *Craterellus* Pers. as compiled by Saccardo (Syll. Fung. **6**: 514. 1888). — Typification. Kuntze left no doubt as to which of the original species he regarded as the type: *Fungoidaster* sp. 5 (*pl. 82 f. 5*). — Typonyms: *Sterbeeckia* Dumort. (1822; preoccupied) and *Craterellus* Pers. (1825).

Tubulicrinis Donk *in* Fungus **26**: 13. 1956. — Etymology: tubulus, small tube; crinis, hair. Gender: m.—In the original publication erroneously taken to be feminine. — Type species (by original designation): *Peniophora glebulosa* (Bres.) Sacc. & P. Syd. — Scope. Introduced for a considerable part of *Peniophora* sect. *Tubuliferae* Bourd. & G.

Tulasnella J. Schroet. *in* Cohn, Krypt.-Fl. Schles. **3** (1): 397. June 2, 1888. — Etymology: L. R. E. E. & C. Tulasne. Gender: f. — Type species (only original species): *Tulasnella lilacina* J. Schroet.—This is synonymous with *Tulasnella violea* (Quél.) Bourd. & G.; compare Rogers (*in* Ann. mycol. **31**: 184. 1933). — Valid publication. Descriptio generico-specifica. — Remark. The suggestion by Clements & Shear (Gen. Fungi 342. 1931) to select *Tulasnella anceps* Bres. & Syd., a non-original species, should be rejected. — Typonyms: *Prototremella* Pat. (Aug. 16, 1888) and *Pachysterigma* J.-Olsen apud Bref. (end of 1888).—Costantin [*in* J. Bot. (ed. Morot), Paris **3**: 59-60. 1889] pointed out that the sequence of publication of the three typonyms was: *Tulasnella, Prototremella, Pachysterigma.* — Compare also *Muciporus* Juel.

Uthatobasidium Donk *in* Reinwardtia **3**: 376. 1956. — Etymology: *οὖθαρ, —ατος*, udder; basidium. Gender: n. — Type species (by original designation and only species mentioned): *Hypochnus fusisporus* J. Schroet (*Hypochnus flavescens* Bonord. sensu Fuck.).

Van-Romburghia Holterm., Mykol. Unters. Tropen 104. 1898 ("*Van Romburghia*"). — Etymology: P. van Romburgh. Gender: f. — Type species (only original species): *Van Romburghia silvestris* Holterm.—This species is now regarded as conspecific with *Phlebophora rugulosus* Lév.; see Patouillard (*in* Bull. Soc. mycol. France **10**: 55-56. 1894) and Von Höhnel (*in* S.B. Akad. Wiss. Wien, Math.-nat. Kl., Abt. I, **117**: 1008-1010. 1908). Moreover, Von Höhnel considered the plant an abnormal state of some species of *Mycena;* this it is definitely not, as I was able to convince myself from several personal collections in Java; and compare Boedijn [*in* Sydowia **5**: 213-214. 1951; as *Vanromburghia rugulosa* (Lév.) Boed.]. — Status. According to the present wording of the Code the name *Van Romburghia* (in two separate words) would not be validly published. It is preferable to regard it as a validly published name that must be written into one by writing it '*Van-Romburghia*' as was done by Saccardo (Syll. Fung. **16**: 1289. 1902; in two words elsewhere), or '*Vanromburghia*', as was done by Ainsworth & Bisby (Dict. Fungi 315. 1943) and Boedijn (*l.c.*).

Vararia P. Karst., Krit. Öfvers. Finl. Basidsv. Tillägg 3: 32. 1898 (= Bidr. Finl. Nat. Folk **62**: 96. 1903). — Etymology: varus, pimple. Gender: f. — Type species (only original species): *Xerocarpus alutarius* (Berk. & C.) P. Karst. = *Radulum investiens* Schw. — Protonym. Karsten used the name before, (i) when he published a description of "*Vararia alutaria* (Berk. et C.) Karst.", and nothing else, in 1888 (Karsten *in* Medd. Soc. Fauna Fl. fenn. **16**: 2), and (ii) in 1889 (Karsten *in* Bidr. Känn. Finl. Nat. Folk **48**: 417), when he used it in the key to the species of *Xerocarpus,* where it is added in parentheses after the characters of *X. alutarius.* In both cases the name was not validly published as a generic name. In the first case the descriptio generico-specifica is not

based on a new species. In the second case the same argument applies if one wants to consider the name as a generic nomen alternativum, rather than as an infrageneric epithet, which was perhaps the intention. — TYPONYM. Compare *Langloisula* Ell. & Ev. (1889).

Veluticeps (Cooke) Pat. *in* Bull. Soc. mycol. France **10**: 78. 1894. — ETYMOLOGY: velutum, or velutinus, velvety; -ceps, -head. Gender: f. (so used by Cooke). — TYPE SPECIES (same as of basinym): *Hymenochaete veluticeps* Berk. & C.—Renamed *Veluticeps berkeleyi* Cooke on the occasion of the publication of the basinym. — PROTONYM: *Veluticeps* Cooke *in* Grevillea **8**: 20. 1879 (nomen provisorium).—The first publication of '*Veluticeps*' is not valid since Cooke did not definitely accept it either as a subgeneric epithet or a generic name, and gave no description of the taxon:

> "There is still one other form which the hymenium assumes in two species distinct from either *Hymenochaete* or *Peniophora*. The type of this form is *Hymenochaete veluticeps*, Berk. & Curt., ... and the other ... species is *Hymenochaete crocicreas*, Berk. & Br. ... [Follow descriptions of the hyphal pegs for each of these species separately]. If these two species are still retained in *Hymenochaete*, they must be relegated to a subgenus, and the generic character modified; or perhaps better still, constituted into a genus under the name of *Veluticeps*, as *Veluticeps berkleyana* [!] and *Veluticeps crocicreas*."—Cooke (*in* Grevillea **8**: 19-20. 1879).

Shortly afterwards Cooke decided to recognize the taxon as a subgenus. — BASINYM: *Hymenochaete* subgen. *Veluticeps* Cooke *in* Grevillea **8**: 148. 1880.—Introduced with four species of which one is *Hymenochaete veluticeps* Berk. & C. — VALID PUBLICATION. The generic name is generally ascribed to Cooke, but this author only created a subgenus of that name (although he combined the four involved specific epithets with '*Veluticeps*'). The first to use '*Veluticeps*' definitely in generic rank was Patouillard (in a note under '*Veluticeps berkeleyi* Cooke'). — TYPIFICATION & SCOPE. The species of which the specific epithet was taken up for the whole group has been regarded as the type by Patouillard: "... Cooke ... en a fait le type du genre *Veluticeps*, charactérisé par des soies flexueuses ou fasciculées ..."; it is the only species dealt with by Patouillard. The same species was listed by W. B. Cooke (Gen. Homobas. 98. 1953) for the subgeneric name.

Vuilleminia Maire, Rech. cytol. taxon. Bas. *in* Bull. Soc. mycol. France **18** (Suppl.): 81. 1902. — ETYMOLOGY: P. Vuillemin. Gender: f. — TYPE SPECIES (only original species): *Corticium comedens* (Nees ex Fr.) Fr. [49])

Wiesnerina Höhn.—See "Cyphellaceae".

Xerocarpus P. Karst. *in* Rev. mycol. **3** (No. 9): 22. 1881. [50]) — ETYMOLOGY: ξηρός, dry; καρπός, fruit. Gender: m. — TYPE SPECIES (selected): *Stereum alneum* (Fr.) Fr. sensu P. Karst.—For this species, see under *Phanerochaete*. — SCOPE & SUBSEQUENT TREATMENT. Introduced with nine Finnish species mentioned as examples; the genus was divided into "A. *Euxerocarpus*" (six species) and "B. *Peniophora* Cook." The species of the typical group are: (i) *Stereum odoratum* (Fr.) Fr. sensu P. Karst. (for which see under *Phanerochaete*), (ii) *Stereum alneum* (Fr.) Fr. sensu P. Karst. (for which see under *Phanerochaete*), (iii) *Corticium polygonium* (Pers. ex Fr.) Fr., (iv) *Corticium polygonioides* P. Karst., (v) *Corticium violaceolividum* (Sommerf.) Fr., and (vi) *Corticium rutilans* "Fr." The original description, containing "... Receptaculum ... tenuissimum aut fere nullum .... Hymenium aridum", appears singularly inapt for this set of fungi! — The next year the author (Karsten *in* Bidr. Känn. Finl. Nat. Folk **37**: xv, 133. 1882) dealt more fully with the genus, describing 27 species from a much wider geographical range. In regard to the typical original species some alterations were made; *Corticium rutilans* was referred back to *Corticium*, and *C. violaceolividum* transferred

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[49]) Listed by W. B. Cooke (Gen. Homobas. 99. 1953) as *V. "comedans"*.

[50]) According to W. B. Cooke (Gen. Homobas. 99. 1953), "used only in key, no description". There is an accompanying description, however, although it forms part of a key: "Sporae albae aut ochraceae. / Receptaculum lentum. / Receptaculum tenuissimum aut fere nullum, effusum, resupinatum. / Hymenium aridum. Sporae minutissimae."

to a new subdivision ('*Xylobolus*') of the genus. Karsten's next use of the name in 1889 (*in* Bidr. Känn. Finl. Nat. Folk **48**: 417) is characteristic of his loose nomenclatural methods. On that occasion "*Xerocarpus* Karst. (Rev. myc. janv. 1881, p. 22). Hattsv. II, p. XV, 133 pr. p." covered one species, and three others placed in an appendix ("Bihang"). That one 'typical' species is *Corticium subsulphureum* P. Karst. = *Peniophora subsulphurea* (P. Karst.) Höhn. & L.; it was described in the same year as *Xerocarpus* but at that time not included in that genus. Thus none of the original species was retained under *Xerocarpus* of 1889. '*Stereum alneum*' and '*Stereum odoratum*' were included in a new genus (*Phanerochaete* P. Karst.); *Corticium polygonioides* was placed in *Lyomyces* P. Karst. (1882); and *C. polygonium* included in *Cryptochaete* P. Karst. — Typification. From the foregoing remarks it appears that of the original six species of 1881, four were retained in the genus as treated in 1882. They are numbers (i) and (ii), the species of Karsten's later genus *Phanerochaete* (1889), and (iii) and (iv), both also excluded in 1889. Numbers (i) and (ii) may be interpreted as forming the original 'kernel' of *Xerocarpus*, and of these number (ii), the same species indicated as the type of *Phanerochaete*, is here also chosen as the type of *Xerocarpus*. — W. B. Cooke (Gen. Homobas. 99. 1953), who considered the generic name validly published in 1882 rather than in 1881, rigidly applied the first-species rule and listed *Stereum repandum* (Fr.) Fr. (the first species in 1882) as type. This choice has to be rejected because this species is not an original one of the group '*Euxerocarpus*' of 1881, and in 1882 was placed in a special subdivision ('*Xylobolus*') of *Xerocarpus*. — Homonym: *Xerocarpus* Guillerm. & P. Perrot. (1832; Papilionaceae). — One could perhaps incline to the view that '*Xerocarpus* P. Karst. 1889' should be treated as a later homonym. Considering Karsten's own references to his previous uses accompanying the name in 1889, it looks more like a thorough misapplication. — Typonym: *Phanerochaete* P. Karst. (1889), and compare *Corticium* Fr. (1835; preoccupied). — Status. Impriorable on account of the earlier homonym.

Xylobolus P. Karst. *in* Meded. Soc. Fauna Fl. fenn. **6**: 11. 1881. — Etymology: *ξύλον*, wood; *βαλλω*, I throw. Gender: m. — Type species (selected): *Stereum frustulosum* (Pers. ex Fr.) Fr.[51]) — Scope: Introduced with four species: "*X. repandus* (Fr.), *X. areolatus* (Fr.), *X. frustulosus* (Fr.)", and *Xylobolus tumulosus* P. Karst. described at the end as a new species. It thus corresponds to *Stereum* group *** of Fries (Hym. europ. 642. 1874) instignated for species "Lignosa, perennia, ... hymenio confluenti-stratoso ..." — Typification. It is safe to assume that the first two species were not known to Karsten except by descriptions. As late as 1889 (*in* Bidr. Känn. Finl. Nat. Folk **48**: 404) *Stereum frustulosum* and *Xylobolus tumulosus* were the only species admitted by him for Finland, and of these *S. frustulosum* is the best known, most common, and most important representative of the genus. I do not hesitate to regard it as the type species. — There is a previous indication, of *Stereum repandum* (Fr.) Fr., by W. B. Cooke (Gen. Homobas. 100. 1953), the result of a rigid application of the first-species rule.

Zonaria Roussel.—See Auriculariaceae.

Zygodesmus Corda.—See Deuteromycetes.

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[51]) It has been argued that the correct epithet is 'frustulatum'; this was also the form used by Fries in 1821 (Syst. mycol. **1**: 445).

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